IN WILDEST AFRICA

C. G. SCHILLINGS

AUTHOR OF

"WITH FLASHLIGHT AND RIFLE"

Mrs D Boardman

IN WILDEST AFRICA

LONDON, August 1st, 1907

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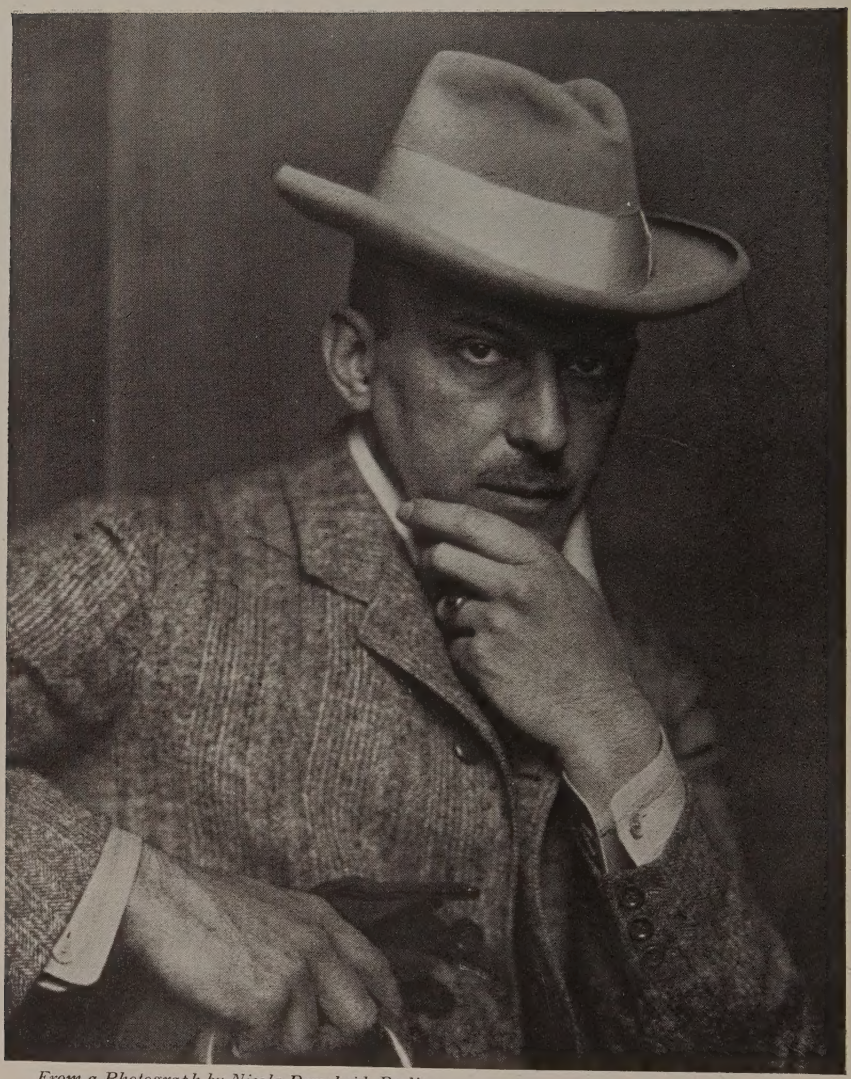

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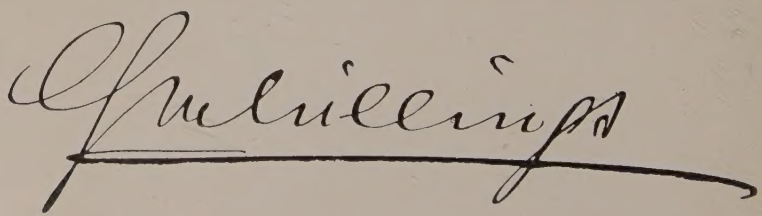


IN WILDEST AFRICA

BY

C. G. SCHILLINGS

AUTHOR OF "WITH FLASHLIGHT AND RIFLE IN EQUATORIAL EAST AFRICA

TRANSLATED BY

FREDERIC WHYTE

WITH OVER 300 PHOTOGRAPHIC STUDIES DIRECT FROM THE AUTHOR'S NEGATIVES, TAKEN BY DAY AND NIGHT; AND OTHER ILLUSTRATIONS

NEW YORK AND LONDON

HARPER & BROTHERS PUBLISHERS

1907

LION STUDY.

Preface

I NEVER dreamed that my book *With Flashlight and Rifle*—alike in its German and its English and American editions—would receive everywhere so kind a welcome, or that it would make for me so many new friends, both at home and abroad.

I have been encouraged by this success to give a fresh series of my studies of African wild life and of my "Nature Documents," as Dr. Ludwig Heck has designated my photographs, in the present work.

I should like to express my gratitude once again to all those who, in one way or another, have furthered my labours in connection with these two books, especially to Dr. Heck himself and the other men of eminence and learning whose names I mentioned in my preface to *With Flashlight and Rifle*. A complete list of all my kind helpers and well-wishers would be too long to print here. I am deeply indebted, too, to the many correspondents—

men of note and young schoolboys alike—who have written to me to express their appreciation of my achievements. Their praises have gone to my heart. I owe a special word of thanks to President Roosevelt, who smoothed the way for my book in the United States by his reference to me in his own volume *Outdoor Pastimes of an American Hunter*. I take the more pleasure in discharging this debt in that I had long derived intense enjoyment from President Roosevelt's masterly descriptions of wild life and sport in America. President Roosevelt has always been one of the foremost pioneers in the movement for the preservation of nature in all its forms, and has made every possible use of the resources placed at his disposal by his high position to further this end.

This new book of mine is in form a series of impressions and sketches, loosely strung together; but it will serve, I hope, indirectly to win over my readers to the one underlying idea—the idea upon which I harp so often—of the importance of taking active steps to prevent the complete extermination of wild life.

Like *With Flashlight and Rifle*, this supplementary work can claim to stand out from the ranks of all other volumes of the kind as regards the character of its illustrations. All those photographs which I have taken myself are reproduced from the original negatives without retouching of any kind. Every single one, therefore, is an absolutely trustworthy record of a scene visible at a given hour upon the African velt by day or by night. I insist upon this point because herein lie both the value and the fascination of my pictures.

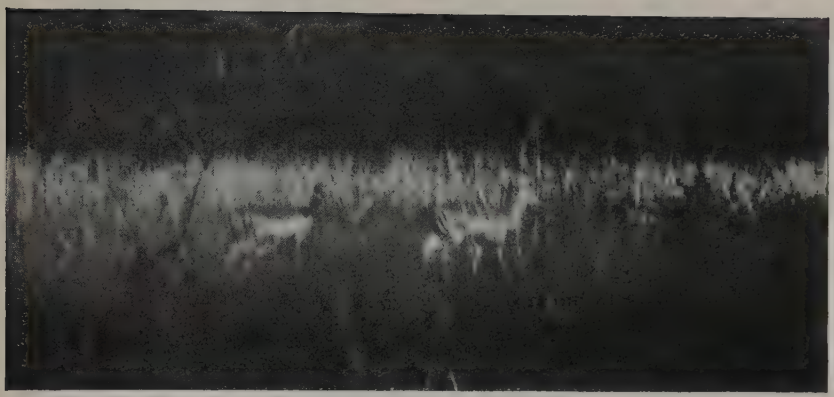
Preface

In his introduction to the English edition of *With Flashlight and Rifle* Sir Harry Johnston declares that that work was "bound to produce nostalgia in the lines of returned veterans"; I trust that *In Wildest Africa* will bring also to such readers a breath from the wilderness awaking in them memories of exciting experiences on the velt. Above all, I trust that its appeal will be not to grown readers alone, but that it will have still stronger attractions for the coming generation.

A preface should not be too long. I shall conclude with the expression of the hope that I may be able presently to secure a new collection of "Nature Documents."

C. G. SCHILLINGS.

C. G. Schillings, phot.



BLACK-HOOFED ANTELOPES.

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GULLS.

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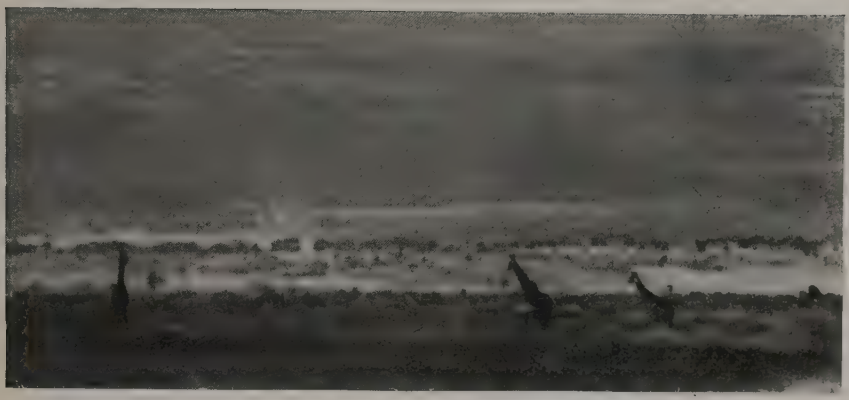


A GIRAFFE PHOTOGRAPH, TAKEN IN THE SHIMMERING LIGHT OF THE VELT.

I

The Spell of the Elelescho

ON the afternoon of January 14, 1897, a small caravan of native bearers, some fifty strong, was wearily making its way across the wide plain towards its long-wished-for goal, Lake Nakuro, which was at last coming into sight in the far distance. The appearance of the bearers and their worn-out clothing showed plainly that the caravan had made a long journey. And so it was. Weakened by fever, I was coming from the Victoria Nyanza in the hope of making a quicker recovery in this more elevated district. As is the way when one is convalescent, life seemed to me something doubly beautiful and desirable now that, after lying seriously ill for weeks, I was recovering from the fever. I had been all but despaired of by the English officers who had kindly taken care of me, Mr. C. W. Hobley

and Mr. Tompkins, to whom I owe a debt of gratitude. I had caught the disease in the marshes of the Nyanza and in my tramp through the wild Sotik and Nandi country, then unexplored or very little known. During the last few days our march had once more been imperilled by hostile tribes, the rebel Wakamassia, but

MY "BOYS"—BODY-SERVANTS AS DISTINGUISHED FROM BEARERS—AMUSED THEMSELVES AT MOSCHI BY ORGANISING WHAT IS CALLED A "GOMA."

this danger was all but past now that we were entering the uninhabited region of the Nakuro, Elmenteita and Naiwasha Lakes, in the district known to the Masai as En'aiposha.

Endless undulating expanses of grassy country, unadorned by a single tree, had made our last days of marching not too pleasant. Now there was a marked

downward incline of the grass-covered plateau ; it gradually changed to a barren plain of volcanic origin, and the view extended over the wide glittering lake.

Filling a far-stretching hollow, and lost to view on the horizon, it lay at our feet, a welcome sight.

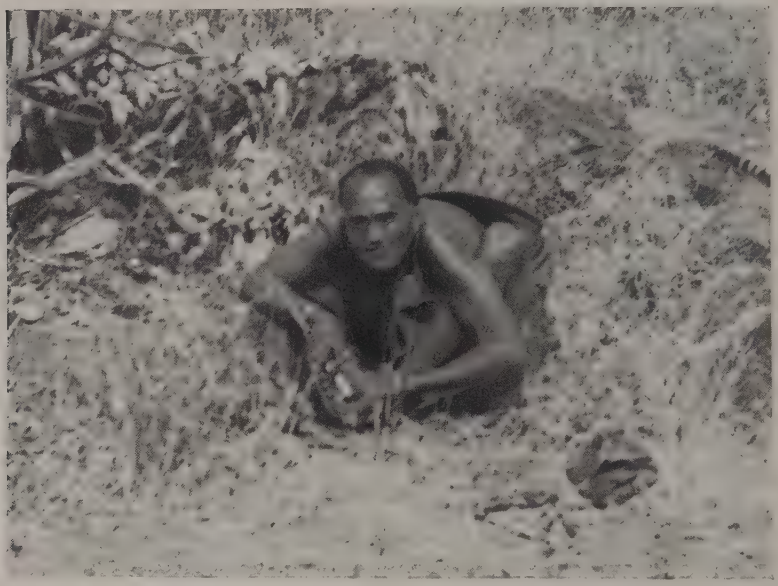
The camp was pitched beside a parched-looking

MY BEARERS LOST NO OPPORTUNITY OF INDULGING IN THE ENJOYMENT OF A BATH.

'msuaki tree on the banks of a brook which at this time of the year was a turbid torrent pouring itself down towards the lake. Some time before, bush and grass fires had raged in the neighbourhood and destroyed the old grass, and here, it would seem, a heavy rainfall had conjured forth for us a new carpet of grass that was fresh and luxuriant. The remarkable luxuriance of the grass

lands in the district had already been specially noticed, and compared to the richest pastures of the Swiss Alps, by the discoverer of, and first traveller in, this region, Dr. G. A. Fischer, an explorer who, alas! so soon fell a victim to the climate.

Fischer—in 1883—was the first to visit the neighbouring Lake Naiwasha. How the situation has changed



A MASAI *ol' moruan* (*i.e.* OLD MAN) ANSWERING MY QUESTIONS ABOUT THE ELELESCHO PLANT.

since then! At that time, and thus only twelve years before I first camped there, the warlike Masai still held these wide uplands as absolute masters.

Oscar Baumann, an explorer who did good service, was one of the first to traverse their inhospitable dominions. It was some years after Fischer's journey that Baumann

C. G. Schillings, phot.

MASAI *ol' morani* AND TWO YOUNGER MASAI IN MY CAMP. THE TYPICAL COSTUME OF THE WARRIOR DIFFERS CONSIDERABLY FROM THAT SHOWN IN THE ILLUSTRATION AT THE END OF THE CHAPTER, WHICH REPRESENTS A MASAI ALREADY

made his way into the region of the Nile sources, during his famous expedition to legend-haunted Ruanda (now better known to us through Dr. Richard Kandt's researches). I made his acquaintance at the Austrian Consulate at Zanzibar. He, also, was snatched away in his early years by the Sphinx of Africa, the treacherous climate.

His journey, only a few years before my stay here, cost his numerous and strongly armed caravan hard fighting with the natives. And now I am camping here with a few men in an unfortified camp!

Fischer was quite convinced that he could not venture upon his exploring journey without the support of the Mohammedan trading caravans, but he had finally to start alone with 230 bearers. Yet, notwithstanding all difficulties, he successfully accomplished his task. But how different from those of to-day were the circumstances under which a journey was made into unknown Masailand at that time! The Masai warrior was then still sovereign master in his own land; he was still "Ol open l en gob" ("Lord of the land") in the full sense of the word. And all the chivalrous poetry that has been so pathetically brought home to us by the fate of the North American Indians, was also not alien to his warlike character. Then came the moment when he had to face the firearms of the Europeans. His fate was sealed, like that of the lion and the leopard.

Then, too, tribute had to be arranged for on all sides. Not only some of the petty chiefs in the neighbourhood of the coast, but the Masai too, must receive costly payments. Thus, for example, Dr. Fischer had to hand over to the

chief Sedenga at 'Mkaramo on the Pagani River, to obtain permission for the passage of his caravan, 100 pieces of cloth, each six yards long, an axe, 100 leaden bullets, one ten-pound keg of gunpowder, two large coils of brass wire, and eight pounds' weight of artificial pearls!

Only two kinds of caravans were known to the Masai, slave caravans and trading caravans, which busied themselves with collecting the coveted ivory tusks. The Arab traders knew how to combine the two objects: the slaves, the "black ivory" of the trade, were forced to carry the white ivory down to the coast.

The strength of these trading caravans, well equipped with firearms, always amounted to several hundred men; but under certain circumstances these numbers were considerably increased, so that caravans of a thousand men or even more were not rare. It took Fischer long months to recruit his caravan. The bearers did not like to undertake the dangerous journey with the first white man who started for that region. The jealousy of the Arab traders was also at work. They feared that the channels of the ivory traffic, which they carefully kept secret, might be revealed.

The German explorer carried through his expedition under the greatest difficulties. He returned home only to succumb soon after to the extraordinary hardships he had endured.

Fischer's researches were of special importance in connection with the ornithology of Masailand.[1] His journey gave to science some thirty-six hitherto unknown

[1] Cf. Reichenow, *Die Vögel Afrikas.*

C. G. Schillings, phot.

A *memento mori* OF THE AFRICAN VELT.

species of birds. Such a result must indeed command our respect, when we consider the difficulties with which the traveller had to contend, and especially when we remember that his available resources were comparatively trifling, beside, for instance, the abundant help that was at the disposal of the English explorers of the same period.

DWARF GAZELLES ON THE VELT. IN THE EDDYING WAVES OF DAZZLING LIGHT ONE COULD NOT KEEP ONE'S EYES OPEN FOR MORE THAN A SECOND AT A TIME.

The Geographical Society of Hamburg rendered him the service of making the execution of his plans possible, and for the same object Fischer expended all the money he had earned in the active practice of his profession as a doctor on the island of Zanzibar. He saw the activity he had devoted to the service of scientific ideals richly rewarded by the results he obtained. And then he had soon to

succumb to the treacherous climate. But if his life was cut short, how quickly the power of the Masai warriors was broken, the very power that had so harassed him, and made his journey so difficult and dangerous. That terrible scourge, the cattle plague, probably introduced from India, suddenly destroyed the greater part of the herds of the Masai, and at the same time blotted out vast numbers of the Masai themselves from the list of the living.

The fates of these pastoral people and of their property (the countless herds of cattle) were so closely bound together, and these warlike herdsmen had become so dependant on their droves of cattle, that once these were ruined they could not survive, but died in a few days of famine.

In the lapse of little more than a year the cattle plague and the Black Death had swept over the Masai uplands. Hungry vultures hovered over scenes of horror. The herds of cattle fell under the strange pestilence. Agonised by slow starvation, the herdsmen followed them to death. I have often found lying together, in one narrow space, the countless white bleached bones of the cattle and the skull of their former owner. It would be an old camping-ground, with its fence of thorns (zereba) long rotted away, and it was now a strangely impressive Golgotha. These heaps of bones, still to be seen in 1897, were soon after dissolved in dust and scattered by the winds.

Where are the Masai of those days?

Suddenly they stand boldly before me, as if they had sprung up out of the ground! It is no illusion.

C. G. Schillings, phot.

MASAI HERDSMEN.

But why do my bearers show no fear? Why does no uproar break out in the camp?

It is plain enough that no one troubles himself about the appearance of these figures, for they come, not threatening and demanding tribute, but conscious of the overpowering might of the European. True, a few months ago, not so far from my camp, their warriors surprised and destroyed a caravan of nearly a thousand coast folk. But, generally speaking, they do not care to have to reckon with the superior weapons of Europe. They even accept some food from me. And in this matter they are not so dainty as they used to be in former times, when the warriors—obedient to strict dietary laws—lived only on the meat and milk of their herds. Of course, here we have to deal with only a small number of them. Yonder, on the wild uplands, there still live a not inconsiderable number of Masai, who having saved their herds, or got them together again, keep as far away as may be from the Europeans and their uncanny weapons.

The Masai warriors, with their wives, children, and herds, seem to me to be fit accessories for this desert landscape. In the evening, dances amuse us till late in the night, and many a wordy skirmish breaks out as some of my bearers who, thanks to former journeys, have some knowledge of the Masai tongue, gossip with these nomads of the wilderness. The coast folk think themselves high as the heavens above the "savage" Masai. The Masai warriors, in return, despise the burden-bearing coast folk, count them as "barbarians," and scornfully call them "il'meek."

But the times have changed, and so it comes to pass that my people too join in the dance, which lasts late into the night; that songs of the warriors and the women—"'Singōliōitin loo-'l-muran" and "Loo-'ngorōyok"—ring out through the darkness, the chorus finding a manifold echo with its oft-repeated "Ho! He! Ho! Na! He! Hoo!" It is a "Leather Stocking" kind of poetry, and indeed the redskins of the New World and the Masai here in Dark Africa seem to me alike. The former had to yield to civilisation, the same fate awaits the latter.

No one had the least anxiety about the night. We quietly allowed the Moran[1] to bivouac near the camp. Our march through the wild highlands of the Wasotiko and the Wanandi had deadened our sense of such dangers. We could have no forebodings of the fierce struggle lasting for years that was yet to come between the English troops and those peoples, or imagine how warlike and skilled in self-defence they were. The presence of hundreds of spear- and club-armed warriors in the camp had become an almost daily experience, and great was the surprise of the English officers, later on, when they heard that the great caravan, which I had joined, had had the good fortune to pass through these districts without any fighting.

For me my serious illness had all at once interrupted the austere and wild delights of this life of the march and the caravan. But I had now become doubly responsive to the joys of travel amid light and air, freedom and endless space; doubly responsive also to the changing

[1] *El moran* = the "young men," *i.e.* Masai warriors.

C. G. Schillings, phot.

YOUNG MASAI DANCING AND SINGING NEAR MY CAMP.

impressions derived from my week of marching through lonely primeval forests, bamboo thickets, and grassy plains—scenes in which, as my friend Richard Kandt, the discoverer of the source of the Nile, so strikingly remarks,[1] every plant, every stone, seems to cry out again to one in the vast solitude but one word: "The desert! the desert!"

In the early morning hours of January 15 there was a light continuous rainfall. A short march of only two hours brought us to our camping place on the shore of Lake Nakuro.

Far away extended the panorama of the lake, which lay before us filling its hollow bed, with its banks at this season of the year yielding fresh pastures to numberless herds of wild animals, and its waters affording rest and food to countless members of the feathered tribe. I had hardly ever seen greater numbers of the pretty little dwarf gazelles (*Gazella thomsoni*, Gthr.). Thousands and thousands more of these graceful creatures showed themselves on the fresh, green, grassy meadows of the lake margin, or scattered over its pebble beds of obsidian, augite, and pumice-stone. Wherever one turned one's gaze it fell again and again upon these beautiful gazelles, which in many ways reminded one of wild goats at pasture, and were so strangely trustful that they often allowed the spectator to come quite close to them. Marked as are the colours of its hairy covering, the dwarf gazelle does not stand out boldly from the background, whether this be a plain blackened by bush-fires,

[1] Dr. Richard Kandt, *Caput Nili*. (Berlin: Dietrich Reimer.)

or the mere bare ground, dun-coloured and brown, or land covered with soft green grass. But how clearly defined are its brown, black, and white, when we look closely at the hide of a specimen we have secured, or see it in a museum.

Darker spots in the distance far away from us we take to be larger wild animals. The field-glass shows that they are hartebeests, and a great number of waterbuck; and still farther off there is a moving mass that shimmers and is half lost in the glare of the morning sun. There are zebras, and yet more zebras, moving like living walls! Strange effects of light actually give us the impression of something like a wall or rampart, made up of the living forms of the zebras—the deep shadows they throw come out black, their flanks are lighted up in the dazzling sunshine, and they shimmer with all colours and with ever-changing effect.

Here by the lake we have the characteristic mark of the wilderness: dwarf gazelles and zebras, zebras and dwarf gazelles in greater and greater multitudes! Wherever the eye glances it falls upon these two species, and the numerous waterbuck and Grant's gazelles, and the hundreds of hartebeests, are in a sense mere points of relief for the sight amidst these vast crowds. Bathed in the shimmering light this multitude of animals mingles together. Wherever I make my appearance there is for awhile movement in the mass of wild creatures, which otherwise are grazing quietly. I have long since left the camp a considerable distance behind me. I am following one of the rhinoceros—or hippopotamus—tracks leading to

BEARERS ON THE MARCH. THE FIGURE ON THE RIGHT IS AN ILLUSTRATION OF THE WAY IN WHICH THEY SOMETIMES RELIEVE THE STRAIN ON THEIR SHOULDERS BY CARRYING THEIR LOAD AT ARMS' LENGTH OVER THEIR HEAD. A HUNDRED PACES A MINUTE IS AN AVERAGE RATE FOR A HEAVILY LADEN BEARER.

C. G. Schillings, phot.

TRANSPORT BEARERS IN DIFFICULTIES.

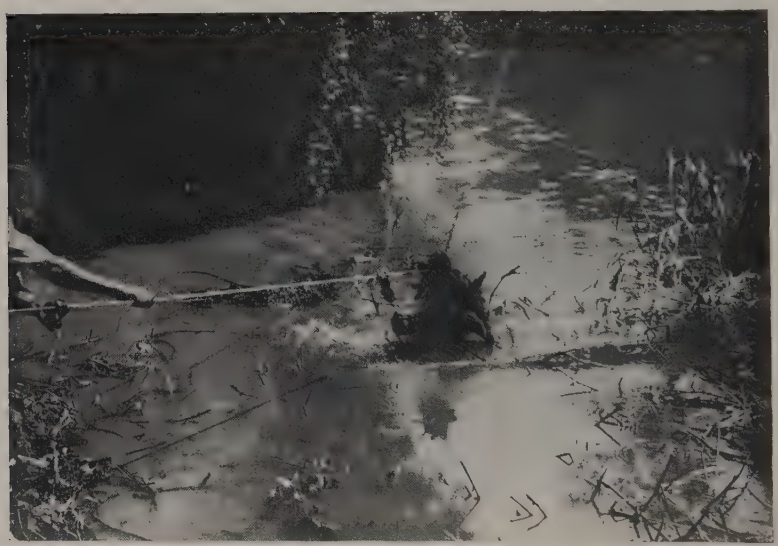
the lake margin, lost, so to speak, in this multitudinous animal life, and once more I have the feeling of finding myself, as it were, in the midst of a vast flock of sheep, and the impression that all the creatures about me are not "wild beasts," but rather tame domestic animals that have

THE AUTHOR BEING CARRIED ACROSS A SWAMP.

been driven out here to graze on the pastures under the supervision of a herdsman.

The mass of animals surges and undulates to and fro. Some old bulls of the heavily horned hartebeest species seem to have undertaken the duty of sentinels. They stand apart fixed and motionless, watching attentively the strange appearance of the approaching man, and then make away in a long striding gallop, with heads bent well down, to increase the distance between themselves and

the suspicious object, ready all the while to give the alarm signal for a general stampede by loud snorting. In this district we do not find the flat-horned hartebeest of the Kilimanjaro (*Bubalis cokei*, Gthr.), but the species named after its discoverer, Jackson (*Bubalis jacksoni*). Long and stately horns distinguish this variety of a remarkably formed species of antelope, which is widely



HOW MULES AND ASSES ARE GOT ACROSS A RIVER.

distributed throughout Darkest Africa. To my great delight I succeeded in bringing down a specimen of a much more interesting species, Neumann's hartebeest[1] (*Bubalis neumanni*, Rothsch.), then only known by one or two examples.

[1] I gave the skull of this specimen to the Berlin Natural History Museum.

C. G. Schillings, phot.

TWO OF MY WANDOROBO GUIDES.

C. G. Schillings, phot.

A HALT OF MY CARAVAN ON THE VELT. ON THE LEFT CAPTAIN MERKER, THE EXPLORER OF THE MASAI COUNTRY AND THE GREAT AUTHORITY ON THE RACE; NEAR HIM, WEARING A TROPICAL HELMET, STAFF-SURGEON KÜNSTER, WHO LATER SERVED IN THE SOUTH-WEST AFRICAN CAMPAIGN.

Overwhelming in its vastness, its rich variety of colour, form, and movement is the picture of animal life thus displayed.

Moving along the hollows of the plateau hour after hour, looking out from its ridges, now with the field-glass, now with unaided sight, I find the whole grassy expanse covered with these wild creatures. Hundreds and hundreds more of zebras alternate with larger or smaller herds of Grant's gazelles. Near them, but keeping apart, and all around them the dwarf gazelles are swarming. Here and there one sees the proudly uplifted head of a stately waterbuck, adorned with splendid branching horns, and not far off his hornless doe, both of them in form and action greatly reminding one of the stag of our northern lands. Occasionally the eye catches sight of splendid black-plumed cock ostriches here and there on the plateau. They watch the traveller carefully, and are accompanied by their mates, which are very much more difficult for the eye to make out owing to their plain grey plumage. On all sides there are whole herds of brown hartebeests grazing, resting, or making for some more distant spot with their characteristic long striding gallop. And now one suddenly comes upon a herd of giant eland antelopes, brownish yellow, and adorned with white cross-stripes. Conscious of their mighty strength, there is not much shyness about them ; but they know not the danger they run from the long-range weapon of the European.

Think of all this animal life bathed in the fulness of the tropical sunlight ! All depths and shades of colour play before our eyes. Strongly cast shadows, ever changing

with the position of the sun, alter again and again the whole appearance of this world of life, and from minute to minute it presents new riddles to any one who has not had years of experience in the wilderness. When the glittering light of the midday hours is tiring and confusing the sight, one often can hardly tell for certain whether it be a living multitude stretching out in the distance before one, or whether the play of the sunlight is imparting a semblance of life to scattered clumps of thorn bushes.

Four rhinoceroses which I now descry moving across the plain in the distance, and a flock of ostriches which I can plainly make out with the field-glass, change shape and colour so often that it is astonishing to see them. According to their movements and position with respect to the sun they appear to be of a blending blue and grey, or intensely black, and then again almost invisible and the colour of the earth, but always changing, always different from what they were the moment before.

To realise all this one must in fancy place oneself in the condition of exaggerated susceptibility to nervous excitement that results from the intensity of the light, together with the climate, and the unusual degree of hardship. All this produces the greater effect because one has to do one's work in solitude and loneliness, and is cut off from all interchange of ideas with one's fellows.

Here, where the flora makes so poor a display, the fauna is abundant. What a sight it affords for the ornithologists!

Amongst the herds of zebras our European stork

C. G. Schillings, phot.

MASAI WARRIORS, ARMED WITH THE LONG SPEARS WHICH HAVE COME INTO USE WITH THEM DURING THE LAST GENERATION OR TWO. IN FORMER DAYS, ACCORDING TO HOLLIS, THEY USED SPEARS WITH SHORTER BLADES.

together with its smaller African cousin, the Abdim stork, is stalking in hundreds over the plain hunting for locusts. In company with the storks I saw also great flocks of the handsome crested crane engaged in the same occupation. Or they rose in heavy flocks over the valleys with loud and strangely discordant cries. Under the scanty shadows of the mimosas the splendid giant bustards take their stand at midday, erect, solemn, stiff-necked. At this time they are not very wary, but in the coolness of the morning and in the evening hours they soon get away to a safe distance, either running with their quick mincing step, or spreading their strong pinions for a short flight along the ground. Their smaller relative, *Otis gindiana*, Oust., rose before me in the air, often throwing somersaults on the wing like a tumbler pigeon. There is hardly any other bird of its size that has such a mastery of flight. Sea-eagles circled by the margin of the lake uttering their beautiful clear-sounding cries. Heedless of their presence thousands of splendid rose-red flamingoes soared up into the deep blue dome of the sky, or lined the margin of Nakuro, like a garland of living lake-roses, in company with great flocks of ducks, geese, and waterside birds of many kinds. Out of the clumps of acacias, and from between the thickets of 'msuaki bush by the lake, guinea fowl and francolins rise, strung out in clattering flying lines, and in the morning hours handsome sandfowl that have come from far-off regions of the plateau sail by the margin of the lake. Altogether an overwhelmingly rich picture of warmly pulsating life and activity! The sight of it all is indeed quite capable of impressing one with

the idea of flocks of wild creatures that have been completely tamed; and once this idea has suggested itself, the impression is so strong that for many minutes one can believe in it!

Amidst all this wealth of "wild" life, which here seems hardly to deserve the name of "wild," it is much easier to understand how primitive man in other continents gradually secured domestic animals for his use, from the vast range of choice thus presented to him.

But a strange feeling comes over the observer when he remembers that out of all this wealth of animal life the African has never been able to link one single creature permanently to himself. He obtained his cattle and also his goats and sheep from Asia. The camel may be left out of account, for its connection with the human race is lost in the mystery of primitive times. We may say that the fauna of Africa has not given a single species to the group of our domestic animals. It is sad and humiliating to reflect that the men of to-day cannot accomplish what was done in the dim past—granted that it took endless ages in the doing.

There were times, as I have said, when I could not get rid of this impression of *tame* herds of animals. And this was all in a land, and a district, that left one nothing to desire in the way of primitive wildness. What, then, must it have been in early days when man was not yet waylaying the beasts of the wilderness, or at least had not yet employed the poisoned dart and spear, the pitfall and the snare? It must have been a veritable Garden of Eden. But here, far and wide, there is

C. G. Schillings, phot.

GROUP OF MASAI, SHOWING THE HEAVY IRON ORNAMENTS WORN BY THE MARRIED WOMEN. IN THE BACKGROUND, ONE OF THEIR HUTS, PLASTERED OVER WITH EARTH.

nothing to be seen of man, only something that evokes conjectures as to his former presence.

For suddenly from a height I notice a number of large mounds, formed of stones, such as only the hand of man could have built up. Under the secure protection of these masses of rock—rough hillocks of heaped up stones—men, who were once chiefs and elders of the Masai, sleep their everlasting sleep. Their resting-places have been so placed that they are not visible from any considerable distance, but are hidden away in the hollows of the ground. Out there in the wilderness, beneath the bright blue sky, these simple old monuments speak to me most impressively of the mighty harmony of everlasting change. As chance will have it, I find not far from the graves a human skull shining brightly in the sunlight and resting on a projecting rock. It must have lain here very long, as if keeping a look out on the old tomb of ol 'loiboni, the departed "wizards" of the Masai. The empty eye-holes stare at the ancient grave.

But this symbol of the past is not obedient to the spell of death that whispers here all night long, for it has had to give shelter and protection to the rearing up of new life. As my hand grasps the skull, now brittle with decay, a family of mice takes to flight from inside of it. They had set up their home in this bony palace, and built their nest there.

And as if the Masai, resting probably for centuries under these heaps of stone, had left their herds to me, once more there surges around me this sea of animals. Near at hand they are sharply defined against the ground,

but farther off in the glittering light they grow indefinite. How the whole flood of life contrasts with the grim volcanic barrenness of the landscape!

At this moment my impression of vast shepherd-guarded herds is deepened by the sudden appearance of some spotted hyenas, scattering among the volcanic pebble beds, and then running away over the plain, and seeming to play the part of the shepherds' dogs.

But where are the herdsmen of all these herds? Immediately there comes an answer to my question. Yonder, by the margin of the lake, in the distance, I see little wreaths of smoke rising. The idea they give me of herdsmen on the watch is to be quickly dissipated by a report, not a loud one, followed by puffs of powder-smoke that vanish quickly in the air. The shooting does not disturb the animals that surround me. But then the report is hardly audible, the little puffs of smoke barely perceptible to the eye. I must find out who is disturbing the peace. It is perhaps a caravan making for the Victoria Nyanza. For we are upon the new "road" to the lake—a road which is indeed still in the region of projects, but which soon will be plainly marked with railway metal.

The smoke puffs appear at markedly regular intervals and as quickly disappear. I cannot understand it. For a long time I keep my attention anxiously fixed on these proceedings, all the while hurrying towards this remarkable apparition. At last my field-glasses enable me to descry a man, who from time to time drops on one knee to take aim.

C. G. Schillings, phot.

A PARTY OF MY TRUSTY COMPANIONS.

What in the world is he after?

As we draw closer, I am extremely surprised at seeing that the man does not allow himself to be in the least disturbed in his proceedings. Now his bullets begin to whistle unpleasantly near me. I fire in the air, once, twice. . . . Now his attention is attracted, and simultaneously I perceive a number of dark objects near the marksman. They seem to be his companions, black men, and squatting on the ground.

From the background there emerge now great numbers of such objects—it must be a large caravan.

The distance between us is diminished so that one can see plainly. . . . Now we can shout to each other. . . . At last I learn that the hunter is marching with his long caravan of bearers to the great lake. He has been putting out all his exertions to shoot some wild animals. But although he has many surprisingly interesting hunting adventures to tell of as the result of his three months' march from the coast to this point, that task seems to have been beyond his powers! With a well-aimed shot he has stretched on the ground just one single dwarf gazelle!!

After shaking hands, he bewails the fact that he has a rifle that shoots so badly. He says its system is absolutely worthless, especially against wild animals.

Our fleeting acquaintance is broken off in a few minutes. He is the first newly arrived European that I have met for a long time, but I have not too much sympathy for this class of sportsmen. So my new acquaintance goes off, still blazing away freely. He has been urged on by my information that his camping and

watering place for the day is a long way off, and that the borders of the lake seem to me to be fever-haunted.

A queer kind of shepherd, in truth, for these wild herds! I fear he would be very like a wolf, or rather—to be zoologically and geographically precise—a leopard, in sheep's clothing!

Again I was alone; the disturber of my peace had not frightened away the animals. So, as I was regaining strength rapidly, I decided to halt here for a few days. This meant having to provide for oneself in the most primitive way, for I was short of some of the most necessary provisions and supplies. But in such conditions the decision was not difficult to take. I shall not easily forget the days I spent there.

The plateau of the volcanic lakes Naiwasha, Elmenteita and Nakuro, standing nearly 6,000 feet above the sea, presents to the spectator all the austere, stern, and strange charm peculiar to the Masai uplands.

Some ten years have gone by since that expedition of mine, and all is now changed. Up to that time only the natives had lived in these districts. Few Europeans had penetrated into these solitudes; but now a track of iron rails links the Indian Ocean with the Central African lake basin, and the shrill whistle of the locomotive sounds in the equatorial wilderness. Wherever the influence of the railway extends, the Masai, whom I then learned to know, have disappeared. Reservations have been assigned to them, like the Indians of North America.

My former companion on my travels, Alfred Kaiser, describes, not without a certain feeling of sadness, how he

C. G. Schillings, phot.

BEARERS MAKING THEIR WAY THROUGH HIGH GRASS.

saw them once more, not long ago, under these new conditions, already to a great extent changed by European influence—and changed in a way that was not at all to their advantage. Using, instead of the beautiful Masai dialects, some mangled fragments of English, they scornfully refused objects of barter that were eagerly coveted ten years ago, and insisted on coined money. They no longer wore their native ornaments, but were dressed in European second-hand clothes. In a word they were stripped of all the wild and primitive beauty that had once distinguished them.

It is a hard fate, when a rude aboriginal people is all of a sudden brought into touch with those of a high degree of civilisation.

As the former lord of the land[1] was deprived of his rights, so the same fate, more or less, befalls the splendid animal world that lends its charm to these solitudes.

But then—ten years ago! I had been given back to life after sharp suffering, and all that I was now allowed to see in such rich abundance spoke to me in a more than ordinarily impressive language, a language that seemed to me to have an enduring charm.

And how clearly must this language have sounded in the times of the primitive past!

[1] As late as the year 1859 the Masai warriors menaced the places on the coast between Tanga and Mombassa! Even in the eighties the explorers Thomson and Fischer had to submit to their demands. To that flourishing period of the Masai belongs the origin of their view that even if the Bantu Negro races have cattle, they must have been stolen from the Masai, for, as they say, "God gave us in earlier days all the cattle on the face of the earth."

So we may here attempt a picture of the wild life of the lake margin in former days, on the lines of the sketches I have already traced out of the life and activity of the wild herds of the plateau, as I still could see them. . . .

Out of the many memories of those days, that still work on me like magic, there is one above all that has a special meaning for me: "Elelescho!"

But what is "Elelescho"? the reader will ask. "Elelescho"[1] is the name of a peculiar plant, perhaps it would be more correct to say a bush, that has in many ways set its mark on the flora in the very heart of the Masai region. Ranges of hills covered with silvery-leafed Elelescho, the spicy smell of Elelescho, the water at the camping place redolent of Elelescho—and also, in consequence, tea, coffee, cocoa tasting of Elelescho—that is a memory that remains fixed firmly in one's thoughts of this home of the wild herds and of the Masai. It was these disappearing nomads who gave the bush its beautiful name.

Possibly the musical sound of the name has not a little to do with reconciling us in memory to the plant. For the bush itself has in process of time a monotonous effect not very pleasing to the senses, but for this very reason all the stronger and more enduring. Its character is connected by strong links of memory with our experiences of those days, and the sound of its name awakes rose-coloured recollections. For just as it is not given to man to remember exactly the nature of intense bodily pains, so fancy, looking backwards, kindly blots out much that was hard and little that was pleasant in the life we

[1] According to Hollis, the singular of the word is "O-'l-leleshwa."

C. G. Schillings, phot.

THE CARAVAN ON THE MARCH.

have led. Thus it is that this strange bush, with its silver-grey leaves and aromatic odour, is capable, as hardly anything else is, of awakening in the mind of the traveller a kind of nostalgia—nostalgia for the wilderness, to which he is drawn by so much of beauty and of hardship. We have gained very little by learning that botanists recognise our plant as one of the Compositæ, and name it *Tarchonantus camphoratus*, L. It is to be found also in other parts of Africa; and Professor Fritsch reported, as early as 1863, that he found it growing in Griqualand, then still an unsettled country, where it was called the "Mohatla." It would be a pity if its beautifully sounding Masai name were not preserved for future times, and I must do my best to save "Elelescho" from such oblivion.

One must have learned the word with its sweet-sounding pronunciation from the lips of a proud, handsome, slender Masai warrior in order to understand how so seemingly slight a thing can imbue one's impression of a whole land.

The Elelescho is as prominent in those regions as the oak and beech or fir in Germany, or as the juniper, the heath, and the broom, and has the same influence on the landscape. But it has a greater and deeper influence upon the imagination, because it so dominates those solitudes, that to him who has long travelled in them the mere memory of it evokes a vivid picture of their once familiar aspect. The strong scent of the Elelescho plant leads the Masai to wear the leaves of the bush as a decoration round their ears for the sake of its perfume. It belongs thus to the plants that because

of their scent are used as ornaments by warriors and maidens: "Il-käk ooitaa 'l muran oo 'n—— doiye 'l—— orôpili."[1] So there pass before us Masai maidens and Masai warriors decked with Elelescho leaves and Elelescho branches, and received with sympathetic smiles by the caravan leaders—who, however, unlike the Masai, think very little of it. Very simple and naïve are the relations of these natives with nature around them. Only the obvious, the actually useful, comes into their thoughts, and for my black companions the Elelescho always recalls only memories of poor desert regions of the waste—regions in which they must often endure hunger and suffer many hardships. Far different is the influence of the Elelescho region on my feelings. For me this bush is symbolically linked with the plunge into uninhabited solitudes, with self-liberation from the pressure of the civilisation of modern men and all its haste and hurry.

We wish to feel once more, and to give ourselves up fully to, the spell of the Elelescho—the charm of the Elelescho thickets, that are also in South Africa in the lands about the Cape the characteristic mark of the velt, now so lonely, but once alive with hundreds of thousands of wild herds.

A wonderful night has come on.

The moon—in a few days it will be at the full—sheds its beams in glittering splendour over Lake Nakuro.

The little camp is soon wrapped in silence. The weary bearers sink into deep and well-earned slumber. Only the sentries, pushed far out, are on the alert. It

[1] As Hollis tells us.

C. G. Schillings, phot.

A HERD OF ZEBRAS TAKING REFUGE FROM THE HEAT OF THE MIDDAY SUN.

C. G. Schillings, phot.

FLAMINGOES ON THE MARGIN OF A LAKE. THEY MUST BE VERY LONG-LIVED BIRDS. SOME OF THEM NOW LIVING IN THE COLOGNE ZOOLOGICAL GARDENS HAVE BEEN THERE THIRTY YEARS.

was but a few days since the rebel Wakamassia hillmen were a source of danger to us, and nightly precautions are not yet forgotten. The moonbeams flicker ghost-like over the lake. Night-jars give forth their songs close to the camp all round us. Strange sounds and cries ring out from the throats of the waterfowl on the lake margins, and not far away one hears the snorting of the hippopotami. Jackals and spotted hyenas prowl round the camp, betraying themselves by their voices. The hyena's howl and jackal's wailing bark mingle strangely with the deep bass note of a bull-hippopotamus. Here in the wilderness there is hardly any sound that is louder than the mighty voice of these giants of the water.[1]

A strange feeling came over me. Amid all the ever-varying sensations of the last year my capacity for enjoyment, my sensitiveness to outside impressions, had been developed and enhanced. A short time since I was between life and death, struggling with the treacherous infection of fever. Now I was well. I was breathing the air some three thousand feet higher than the place where I lay ill near Victoria Nyanza. I was again in a region whose vast volcanic solitudes contrasted strongly with its abundance of highly developed organic life, and exercised a strange influence upon me.

Is there such a place as Europe? Is it possible that thousands of miles away there is a centre of civilisation

[1] The pachyderms seem to feel no ill effects from the natron-bearing water; but for men the water of the lake—at least, near my camp—proved very unpleasant. Our drinking water was obtained from a small marsh near the shore of the lake.

whose teeming millions would fain imprint their image on the whole earth, and even lay covetous hands on this far-off wilderness, and that in time this must happen?

A world of which I myself am a unit! How strange that I can delight so deeply in all this wild charm! And how quickly the wishes of men change! A while ago, in the long nights of fever, I had but one desire—that my heart, my heart alone, should not be buried in a foreign soil, but be taken back to the Fatherland.

And now, only a few weeks after my recovery, how different seems to me all I may hope for from Fate, and how much more complex, how much more difficult to accomplish!

I yield myself up entirely to the spell of the wilderness, to the mood of the night.

That was ten years ago, before the Europeans had banished it—when it ached on the senses like the nocturne of some great tone-poet. But I know well that to-day it is no longer in existence; Lake Nakuro is now only a lake like any other, and the railway whistle wakes its echoes.

That night the spell must have been exceptionally strong. It seemed to me as though I were under some charm, as if I were carried back into the far-off times. There came before my mind much of what the lake had seen in the long vanished past. The lands around me heaved and quaked. Mighty earth-shaping forces were doing their work. I seemed to see before my eyes what happened here in primeval times—how volcanic forces, strange, boundless, and terrible, had built up and given

C. G. Schillings, phot.

FLAMINGOES FLYING DOWN TO THE LAKE MARGIN.

form to the country around me here, destroying all living

ALFRED KAISER (IN ARAB COSTUME).

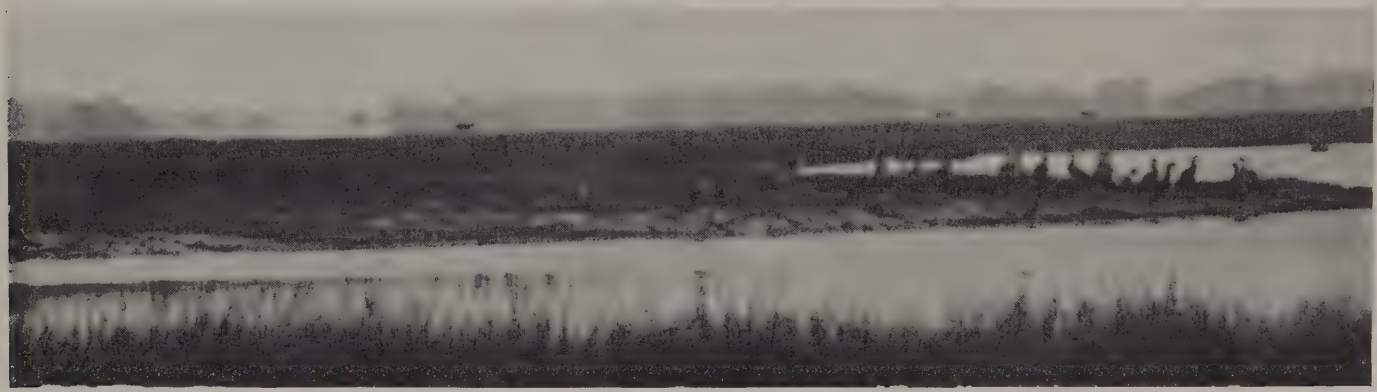
things, and yet at the same time preparing the conditions for the hotly pulsating waves of life of later days. In

my mind I saw pass before me wondrous mighty forms of the animal world of the past, long since extinct. Then—suddenly I started up. What was that?

A loud trumpeting rang in my ears! Elephants! Were there still extant such herds of elephants as those that I saw coming down there to the lake to drink, rolling themselves in the mud of its banks, and openly making friends with the hippopotami? Just as in the daytime I had noticed the different kinds of antelopes and the zebras, so here I saw again the elephants and hippopotami living their life close together, moving round or beside each other without fear or hesitation. The herd, numbering many hundred heads, was guided to its drinking-place silently and slowly by its aged leader, a female elephant of most exceptional size. Many young elephants were there in company with their mothers. Some very little ones, only a few weeks old, played with their comrades, or knowingly imitated the movements of the older animals in the water, while the old ones took care to prevent the tender young creatures from taking any harm.

But it all seemed somehow impossible! Veterans among the most experienced black elephant-hunters had assured me that such huge herds were not to be met with. And if I saw aright in the shimmering moonlight, what a great mass of hippopotami were moving about there before me! And now, paying no attention to the elephants that were peacefully bathing farther out in the muddy water, they clambered on to the land, and began to graze like cows on the bank among some more of the elephants. It was exactly the same friendly relation

GROUP OF GNUS. HARTEBEESTS IN THE BACKGROUND.



C. G. Schillings, phot.

NILE GEESE ON THE LOW BANK OF THE NATRON LAKE (LAKE NAKURO). DWARF GAZELLES IN THE BACKGROUND.

A HERD OF GRANT'S GAZELLES.

C. G. Schillings, phot.

CRESTED CRANES AND ZEBRAS.

that I had seen between the dwarf gazelles and the zebras during the day. Could I be only dreaming? Such a multitude of huge creatures here close to my camp—it could hardly be a reality!

And now I perceived that a second herd of elephants, some hundreds strong, was approaching the water. In a straight line these still more giant-like colossi came down to the lake margin—all of them, as I now clearly perceived, bulls with mighty tusks, and amongst them some quite enormous tuskers, obviously patriarchs of the herd, and carrying some hundreds of pounds' weight of ivory that glittered afar in the moonlight.

The two herds greeted each other with their curious cries, difficult to describe, and then the newcomers began to bathe and drink.

My attention was especially arrested by some of the elephants, clearly visible in the moonlight, keeping apart from the rest. Standing together in pairs they caressed each other with their trunks, while the enormous ears which are such an imposing decoration of the African elephant stood out from their heads, so as to make them look larger than ever.

My wonder increases! Numerous herds of giraffes, hundreds strong, come down to the lake, and this, too, not far from the elephants, and without any fear.

And now there is again a new picture! A herd of innumerable buffaloes. With their great formidable heads turned watchfully towards the rest of the crowd, they too are coming for a refreshing bath. Their numbers still increase. It is a sight recalling, surpassing even, the

descriptions given by the first travellers over the velt regions of Cape Colony.

How did all this accord with the reports I had received of the scarcity of elephants? with the destruction of the buffalo by the cattle plague? with my own previous experiences? The most authoritative of my informants had assured me that in this district the elephant was to be found very rarely, the buffalo hardly ever!

Suddenly with mysterious swiftness the night is gone, and the day breaks. I search for and find the tracks of my giant guests of the night. I had made no mistake. Monstrous footprints are sharply impressed in the mud, the ground looks as if it had been ploughed up, and in the midst of the plain, not very far from the lake, there are actually hundreds of mighty elephants standing near some ol-girigiri acacias. As I begin to watch them, they suddenly become restless. In their noiseless way they make off at an extremely quick rate, and soon disappear behind the nearest ridge.

Round about me I see herds of zebras, hartebeests, and wild animals of all kinds in vaster numbers even than those of yesterday. The deep bellow of the wild buffalo breaks upon my ear. I can see long-necked towering giraffes in the acacia thickets. The snorting of numerous hippopotami sounds from the lake. Some of these burly fellows are sunning themselves on its margin; and quite close to them several rhinoceroses are grazing peacefully in the midst of their uncouth cousins.

I am surprised, too, at seeing a troop of lions disappearing into the bush, after having made a visit to the water.

C. G. Schillings, phot.

A CAMP ON THE VELT.

They are so close to me that I can plainly see by the shape of their bodies that they are going home after having had an abundant repast.

The behaviour of my people puzzles me. I had no opportunity for questioning them as to why they were not more impressed by this unexpected spectacle, for my attention was suddenly arrested by the appearance of a lengthy caravan of bearers, that seemed as if it had emerged before my eyes from the trampled ground. There is new life and movement among the herds of wild animals. Slowly, defiantly, or in swift-footed fear, each according to its kind, all these wonderful creatures seek safety from the approaching crowd.

A robust negro marches at the head of the caravan. He carries a white flag inscribed all over with texts from the Koran. Hundreds of bearers come steadily in. Each carries a load of nearly ninety pounds' weight, besides his cooking gear, sleeping-mat, gun and powder-horn. At regular intervals grave-looking, bearded Arabs march among the bearers. Two stately figures, riding upon asses and surrounded by an armed escort, are evidently the chiefs, and a great drove of asses with pack-saddles laden with elephant tusks brings up the rear. Very quickly the numerous party establish their camp, and I now remark that hundreds of the bearers are also laden with ivory. It is clearly a caravan of Arab ivory-traders.

After the usual greetings—"Sabal kher" ("God bless thee"), and "Salaam aleikum," questions are asked in the Swahili language: "Habari ghani?" ("What news?") I now learn that the party of travellers set out some two years

ago from Pangani on the coast to trade for ivory in the Masai country. I am surprised to hear the Arabs tell how, although theirs is one of the first caravans that have made the attempt, they have penetrated far into the inhospitable and perilous lands of the Masai. Their journey has been greatly delayed, for they have had to fight many battles with the Wachenzi, the aborigines of the districts through which they marched. "But Allah was with us, and the Unbelievers had the worst of it! Allah is great, and Mohammed is his prophet!"

Every one set busily to work. In the turn of a hand the camp was surrounded with a thorny zereba hedge, and made secure.

And now I had personal experience of what has passed, times without number, in the broad lands of the Masai;—armed detachments from the caravan started on raids for far-off districts. The timid Wandorobo, that strange subject tribe of the Masai, brought more and more ivory to the camp to sell it to the traders, after long and obstinate bargaining. It was remarkable how clever were the people of the caravan in dealing with these timid wild folk, and how well they knew how to gain their confidence.[1] This confidence, however, was not made use of in trade and barter for the advantage of the natives. But thanks to the methods and ways of managing the natives, as the traders

[1] John Hanning Speke, one of the discoverers of the Victoria Nyanza, has already remarked that the Arabs know well how to manage their slaves, and to tame them like domestic animals; that they are able to entrust them with business matters, and send them out of their own dominions into foreign countries, without the slaves ever attempting to escape from their masters.

C. G. Schillings, phot.

NATIVE SETTLEMENT WITH PALISADE AND ZEREBA (HEDGE) ON THE MIDDLE COURSE OF THE PANGANI RIVER. (PROTECTIVE CHARMS ARE PLACED OVER THE GATEWAY AND IN FRONT OF IT, IN THE FOREGROUND OF THE PICTURE.)

understood them, we saw that the wild folk were quite satisfied, and this was the main point.

But what patience is required in trade of this kind! A white man could never develop such Oriental patience. Again and again a tusk would be endlessly bargained over, till at last, often after days of chaffering, it passed into the possession of the caravan. The natives were of course bent on getting the tusks, sooner or later, into the camp. At the very outset they had sent in a most exact description of them, and then envoys from the caravan had to go and inspect them, often at a distance of several days' march from the camp.

Every day a great number of Masai warriors appeared in the camp. Men belonging to many kraals, owners of great herds of cattle, camped near the lake. There were not infrequent skirmishes, especially at night time. The young warriors, the Moran, made attempts at plunder, and were beaten off with broken heads. But, on the whole, this hardly disturbed the good understanding. "It is their testuri (custom)," thought the experienced and fatalistic coast folk, and they accepted it as an unavoidable incident of the trade. But festivals were also arranged, with dance and song. In the still moonlit nights the strange chant rang out in a high treble far over the plain, and sounded in the rocky hills, and festivity and rejoicing reigned among the warriors, the girls, and the women.

But by day one saw their busy life displayed, all the bucolic poetry of grazing herds of cattle with their spear-armed herdsmen. There was a great deal to be done, and in each and every task the Masai girls and women showed

themselves, like the men, excellent guardians and attendants of their herds.

In the neighbourhood of the Masai kraals the wild animals of the plain mingled freely with the tame cattle of the Masai, knowing well that the Masai folk would not shoot them. The wild animals were exposed only to the attacks of the Wandorobo. But these latter bore themselves very shyly in the presence of their over-lords, the Masai, and went off to far distant hunting grounds, so that the wild animals were hardly ever disturbed by a hunter.

The young Masai warriors also began to devote themselves to hunting for ivory. With great courage, and often with no small display of dexterity, they killed a large number of elephants, allured by the high prices offered by the caravans. But they kept the beautiful tusks carefully hidden, buried in the earth till the moment when they had successfully arranged a sale. The buried treasure was easy to conceal. At the place where the tusks were put away the grass was set on fire and burned up over a considerable area, and then no eye could distinguish the slightest indication of the buried treasure.

The Elmoran also made use of a method of hunting which is employed in other parts of Africa, namely, to slip quietly up to an elephant, and with a single powerfully delivered sword-cut sever the tendon Achilles. But few indeed were daring enough to attempt this, and these were strong, brave, and well-trained warriors. Such an exploit won for them high respect among their comrades of the clan.

C. G. Schillings, phot.

ELAND-ANTELOPES RALLIED IN A GROUP BEFORE TAKING TO FLIGHT.

C. G. Schillings, phot.

A HERD OF WHITE-BEARDED GNUS. IN THE BACKGROUND ONE OF THE CHARACTERISTIC HILLS OF THE MASAI UPLANDS.

While the Masai warriors thus took their share in elephant-killing, and the Wandorobo stuck to their long, trusted poisoned darts and poisoned spears, the caravan folk attacked the elephants with powder and iron bullets,[1] and slew whole hecatombs of them.

"Nowadays," the leader of the caravan told me, "the chase is easier and less dangerous, and your firearms also give the man from the coast the power of hunting and killing the Fihl (elephant). For example, you know, sir, that my half-brother, Seliman bin Omari, is not a practised hunter. And yet, believe me, he and his people have brought down many, many elephants."

But his banker on the coast, the Hindoo Radda Damja, certainly never hears one word of any elephant being killed by Seliman's people :

"No one is so clever as he is at knowing nothing about elephants when questions are asked. The ivory is always something traded for with the natives, far, far away in the interior," he adds, with a cunning wink. "The main point is that we all get pembe (ivory), and he gets plenty of it! I would like to work the business as he does, but, sir, I am not so clever in preparing amulets, and moreover, I don't know as much as he does of the ways of the elephant.

"But it's a pity that in all parts of the country the ivory is becoming very scarce, so one has to be going always farther into the interior, and one must try to find new ivory districts."

[1] The native elephant-hunters—the "Wakua"—use as a rule several small iron bullets with a heavy charge of gunpowder.

Thus my Arab informant talked a long time with me. He told me much that was interesting and much that was new to me. He told me of caravans that had been massacred, cut off to the last man by the natives in remote districts: and again of caravans that had been not one or two,—no, as long as six years on the march, that had buried a lot of ivory and gradually got it down to the coast. Time counts for nothing here, for the people—that is to say, those who are not slaves—receive only the one lump sum agreed upon for the journey, no matter how long it lasts. His friends, with caravans mustering many hundreds, had carried hundreds and hundreds of barrels of gunpowder into the interior, they had sought everywhere for new districts abounding in ivory, and the result had been the slaughter of the elephants on all sides. Nevertheless he had not much to tell me of men having enriched themselves by this trade. However, this did not apply to the traders on the coast, who advanced the money. These lent money to the caravan leaders, who went into the interior, at the high rate of interest usual in the East, and thus became rich men. They had, of course, also many losses. It happened not seldom that one of their debtors was "lost" in the interior, which means that he simply did not come back, but chose to pass the rest of his life in exile. And in that case it would be a difficult matter for the creditor to take proceedings against him.

Then my informant told me how many of the elephant hunters still living had been carrying on their business already for a long time before any Europeans whatever thought of making a prolonged stay in the country. He

C. G. Schillings, phot.

A MASAI DANCE—THE PHOTOGRAPH SHOWS THE PLAITED QUEUE WORN BY THE YOUNG WARRIORS (EL MORAN), WHO LEAP AS HIGH IN THE AIR AS THEY CAN. THE YOUNG WOMEN, WHOSE HEADS ARE CLIPPED COMPLETELY BARE, SING AND DANCE ROUND THEM.

told me also much that was interesting about the old trade routes extending far through Africa, and even to the Congo. He had friends and relatives who had already traversed these routes many times, and journeyed from the east coast even to the Congo, long before any European traveller. Many of the people of his caravan were able to tell from memory each day's journey as far as the Congo, and give exact information about the chiefs who held sway in each district, and the possibility of getting supplies of various kinds of provisions, such as maize, millet, bananas, or other products of the country.

I cannot exactly say how long he had talked with me about elephants and elephant-hunting, about the ivory trade, and many other things. I only know one thing—that after some time his talk became more and more difficult for me to understand, that I strove in vain against an ever-increasing weariness, and that at last I saw neither the Arab nor the caravan—in a word, saw nothing more, felt nothing more.

I fell into a deep sleep in which, in my dreams, I had a lively argument with some Europeans, who would not believe so many elephants, buffaloes, and other wild animals had formerly been here, and who kept on objecting strongly that it was impossible that all this could have been the case so short a time ago.

When I woke up again I found myself in my lounging-chair, a primitive piece of furniture of my own construction. My black servant stood before me, and asked me if I would not rather go to bed.

I rubbed my eyes—it had all been a dream, then ; the spell of Elelescho must have inspired me with it. How foolish to yield to this spell! But men will perhaps so yield to it when all this has become "historical" and the Masai and their lives and deeds have, like the Redskins of America, found their Fenimore Cooper.

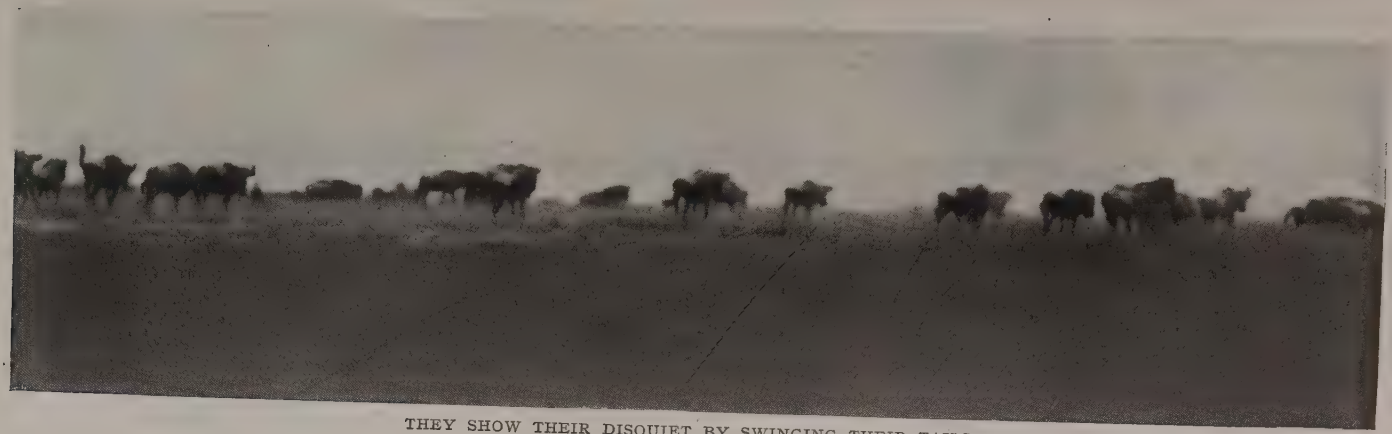
Then may the spell of the Elelescho exert its rightful power ; then may it make famous the slender, sinewy, noble Masai ol-morani as, amidst his fair ones, his "doiye," [1] he leads the song-accompanied dance as he goes out to war, and reigns the free lord of the wilderness! But to-day he bears on his brow the significant mark of an inexorable fate—that of the last of the Mohicans.

The spell of the Elelescho has departed from Lake Nakuro, once so remote from the world.

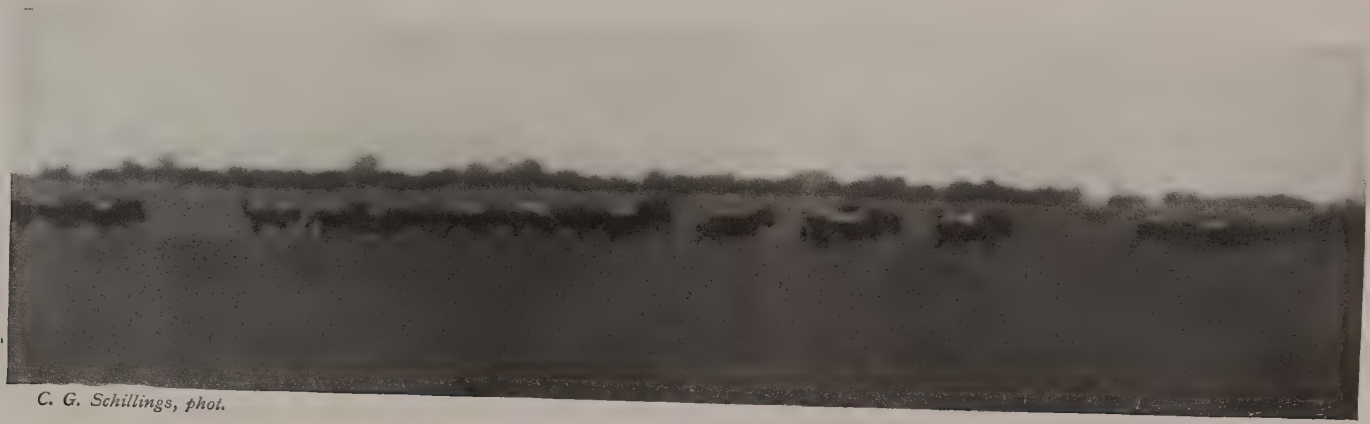
The lake is no longer remote.

Iron railway lines link it with the Indian Ocean. Vanished from it is the spell that I once felt both waking and sleeping ; gone is the poetry of the elephant herds, the Masai the Wandorobo, and the caravan life in all its aspects ; gone all that I saw there. The traveller, if he would learn to know the primitive life and ways, whether of men or of the animal world, if he would know the primeval harmony that speaks to him in an overpowering language peculiar to itself, must press on into the wilderness farther away from these tracks. This harmony, whose special character is day by day disappearing, day by day is in an ever increasing measure destroyed, cannot be recalled under the new, the coming

[1] Singular : en-dito = the young maiden.



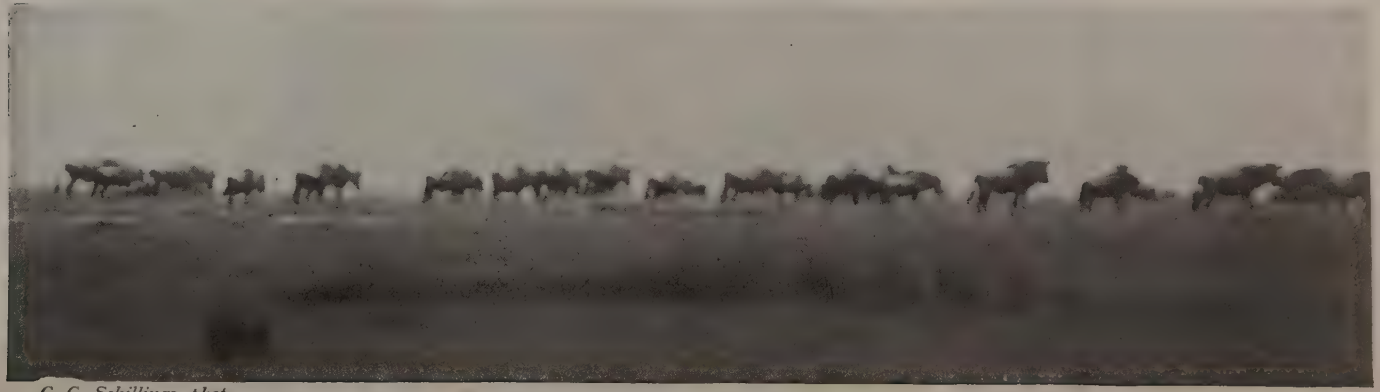
THEY SHOW THEIR DISQUIET BY SWINGING THEIR TAILS.



C. G. Schillings, phot.

FINALLY THEY DECIDE TO BEAT A RETREAT.

A HERD OF WHITE-BEARDED GNUS AT CLOSE QUARTERS.



C. G. Schillings, phot.

A MORE DISTANT VIEW OF THEM.

C. G. Schillings, phot.

EFFECTS OF HEAT AND MIRAGE.

system, the system that abandons itself to restlessness—that, in a word, which we call modern industry, modern civilisation.

To-day one may perhaps read in the *East African Gazette* that Mr. Smith, the railway engineer, favoured by extraordinary luck on a hunting expedition, has seen one solitary bull elephant not far from Lake Nakuro! This is something quite out of the ordinary, and Mr. Smith is to be congratulated. Unfortunately his efforts during many years to have even one young East African elephant sent to London have been without any result. A young animal is no longer to be found. In the same number of this newspaper, under another heading, we read the report that the export of ivory this year by the Uganda Railway has been utterly disappointing; the quantity carried has been terribly small, hardly worth mentioning!

I had a talk lately with a travelling companion who had spent some time with me in the wilderness ten years ago, and who had just revisited those distant lands, availing himself of the railway. Alfred Kaiser, a widely travelled man, recalled to me the life we had lived together, when there was yet hardly a trace of European influence among the people of the interior by Lake Victoria. In memory we saw again the inhabitants of then hardly known Sotikoland receiving us mistrustfully on their frontier, thousands strong. Their glittering spears sparkle in the morning sun; chiefs, ministers, and court ladies of the Wakawiróndo appear in camp in most primitive costume; club-armed warriors regard us with the most open distrust; cowry shells and artificial pearls form their costume and

are used as their money ; sudden attacks and fighting are quite in the order of the day.

And now, only ten years later, Kaiser has seen the Masai at Lake Nakuro, English-speaking caricatures of civilisation.

A feeling of something like resentment comes upon the traveller who has had to pay toll for his journey with the ceaseless sweat of his brow, when he thinks that now any one can reach Lake Nakuro in a few days from the coast. It is true that the over-anxious globe-trotter is kept in check by only too well justified fears of the treacherous malaria and the sleeping-sickness that has made such terrible progress of late. Otherwise the railway journey from Mombassa to the Victoria Nyanza, and then down the Nile to Cairo, would be a much-travelled route.

I have tried to describe, in brief outline, the rapid, unwelcome change of our time, the result of European civilisation forcing its way in. As I describe things, so they were half a century ago, and even yet ten years ago, when I stayed by the shores of Nakuro, and no railway had yet been made there.

To-day one can no longer find the old spell of the Elelescho there, or anywhere else where the white man has penetrated.

The traveller probably sees only a shrubby plant.

It covers many a ridge, and the lonely plains of the uplands, and sends afar its spicy perfume. The botanists call it *Tarchonantus camphoratus*, L. They class it among the Compositæ.

C. G. Schillings, phot.

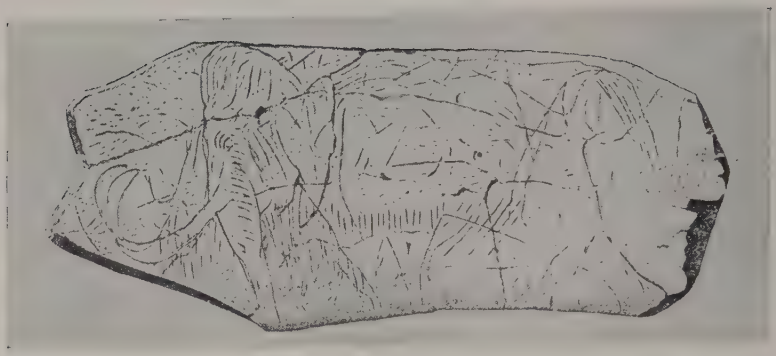
A HOT DAY IN THE GREAT RIFT VALLEY.

But here it can no longer exercise any spell.

That has flown far, far away, into the interior. There, where the white man has not yet come, it still prolongs its existence.

How long yet will it be before it has entirely departed ?

GROUP OF MASAI—THE WARRIOR ON THE LEFT DRESSED IN A COSTUME IMPROVISED OUT OF A COLOURED BED QUILT.



ONE OF THE OLDEST "NATURE DOCUMENTS" FROM THE HAND OF MAN.
PREHISTORIC SKETCH OF A MAMMOTH ON A FRAGMENT OF IVORY.
(From L. Reinhardt's work *Der Mensch zur Eiszeit in Europa.*)

II

From the Cave-dweller's Sketch to the Flashlight Photograph

THE mysterious charm of wild nature, undisturbed, almost untouched, by the hand of man,—the charm inherent in all that I have in mind when I talk of "the spell of the Elelescho"—explains the keen and profound interest with which my pictures of animal life were received at home.

In these days, when even electricity has been harnessed by men, there is a feeling that the knell has been sounded of all that is wild, be it man or beast. And however unpretending and inadequate the little pictures might be that I had won from the wilderness, yet all nature-lovers felt that they had here before them authentic, first-hand records revealing secrets which the eye of man had never before looked upon, or had had but scant opportunity for studying.

These pictures were the first to show really wild animals in full freedom, just as they actually live their life on velt and marsh-land, in bush, forest, air, and water. They showed nature in its unalloyed reality, and therefore a peculiar stamp of truth and beauty must have imprinted itself upon them. They came, too, as a surprise, for in many points the hitherto accepted representations of the animal world and those given by my photographs did not agree.

Mere subject counts for so much in a picture with most people that it takes them a long time to appreciate a work of art the subject of which does not at the first glance appeal to them. This applies peculiarly to my African photographs. It is not a very easy matter for the eye to grasp the movements of the varying forms of animal life in their natural freedom. Often their appearance is so blended with their surroundings that it requires long practice to distinguish the individual characteristics of each, the fleeting graces of their momentary aspects.

I could not, therefore, help feeling a certain apprehension that every one would not at once be able to understand and decipher my pictures in my book, *With Flashlight and Rifle*. It is necessary when one looks at them to understand, in some degree, how to read between the lines; one must make an effort to grasp their more elusive features; in short, one must devote oneself to the study of them with a certain gusto, a certain intelligence. There was a further difficulty arising from the fact that the illustrations could be reproduced only by a process in which unfortunately much of the finer detail of the originals

is lost. The use of the process, however, was necessary for various reasons.

There can be only two ways of securing the best possible result in the execution of pictures of such subjects. The ideal method would be for heaven-sent artists, after years of study, to give us works of this class, and combine in these masterpieces the strictest truth with the finest craftsmanship. But this requires a thorough study of each separate species of animal seen from afar and at close quarters—and how is this possible, seeing that one gets only momentary glimpses? The other method is that of photography, the picture on the negative, which can claim the advantage of documentary accuracy, and at the same time leaves a certain scope for the artistic sense of the operator. So the greatly improved photographic methods of to-day can step in, at least as a substitute and makeshift, in the absence of works of art such as the genius of one man may yet give us. Considering the extreme difficulty of taking portraits of living animals in their wild, timid state, such pictures can only in a few instances lay claim to technical photographic perfection. But at least so far as my own taste goes, a certain lack of sharp definition in the picture (often deliberately sought for in taking other objects) is not only no disadvantage, but is even desirable. As a confirmation of this idea of mine, I may mention the opinion of an American journalist, who declares that my picture of a herd of wild animals given on page 327 of *With Flashlight and Rifle* to be the most perfect thing of the kind he has seen, and the most pleasing to him, and compares it to the work of a Corot.

It must be noted that *if the animals are drawn so as to stand out separated from the landscape which is a needful accessory of the picture, and brought forward into the foreground in an obviously selected pose, they must appear unnatural to the eye of the expert.* Such pictures cannot fail to give an unnatural impression, for in the freedom

PICTURE OF A FEMALE HIPPOPOTAMUS FROM LE VAILLANT'S BOOK OF TRAVELS, PUBLISHED MORE THAN A HUNDRED YEARS AGO.

of the wilderness the animal world never presents itself in this way to the eyes of man. In their full significance as masterpieces of nature, all the various aspects of the animal world are first manifested to us in close connection with their environment. It has been a keen satisfaction to me to find that many world-renowned artists have appreciated warmly the beauty of these photographs, and

have given expression to this feeling. I have been told, for instance—what I myself had already noticed—that numbers of the pictures, especially those showing birds on the wing, bear a great resemblance to certain famous works of Japanese painters[1] of animal life, works that seem to dive into the secrets of nature. It has been brought home to me, indeed, both by hundreds of letters and thousands of opinions expressed in conversation, that the pictures have excited almost universal interest, and that my labours have not been in vain.

Fully to enjoy the peculiar beauty of such photographs of living wild animals, the best way is undoubtedly to see the pictures considerably magnified by means of the magic lantern. On account of the special character and strangeness of most of the objects shown, I have the lantern slides lightly tinted. This colouring can be done without in the least altering the picture in its details, and its object is merely to secure greater effectiveness. Approval from all sides, both from artistic circles and from the public, satisfies me as to the correctness of this proceeding. Only in this way do photographic pictures shown by transmitted light produce the full impression of beauty and naturalness; they seem to transport the spectator directly to the far-off wilderness.

There must be some good reason for the widespread interest manifested in these pictures of the life and ways of animals, some of them still so little known, and all of them living in remote solitudes. It seems to me that the

[1] Cf. also *Ostasienfahrt, Erlebnisse und Beobachtungen eines Naturforschers*, etc., von Dr. Franz Doflein, Leipzig, 1906.

cause is deep-seated—that deep down in the heart of the highly-cultured civilised man there are involuntary yearnings after the sensations of wild, healthy, primeval nature. The progress of mankind from the so-called barbaric stage to the highest civilisation has been accomplished in so short a time, in comparison with the whole period of man's

A GERMAN PICTURE OF THE GIRAFFE DATING FROM ABOUT TWO HUNDRED YEARS AGO.

existence, that it is easy to understand how such a longing may survive. In every man there must be something of this craving for light and air and primeval conditions.

"The conflict of man with the animal world," says Wilhelm Bölsche, "has passed away unsung and uncelebrated. The civilised man of to-day has hardly a

recollection of the endless lapse of time during which mankind had to struggle with the beasts of the earth for mastery." Let us for a few moments turn our gaze backwards to that far past. In epochs that the learned date back by hundreds of thousands of years, we find attempts made by the cave-dwellers to execute artistic representations of nature as they saw it. The artist of prehistoric times set to work with his rude instruments to draw in merest outline on a smooth rock-face, on a tusk taken in the chase, or on some such material, the things that had particularly attracted his thoughts or stimulated his efforts. Specimens of these primitive works of art have been handed down to us. In the first place there are pictures of animals, scratched upon ivory, and notwithstanding all their crudeness, sketched with sufficient ability to enable us to-day to recognise with certainty the objects which the artist tried to depict. Such sketches scratched on ivory, showing various kinds of animals (some of them now extinct) and forming the oldest documents of the animal-sketcher's art, have been found in the caves of the south-west of France, in the old dwelling-places of the so-called "Madeleine" hunters of La Madeleine and Laugerie Basse. The museum at Zurich also possesses similar primitive documents from the Kesslerloch cave, near Thaingen, in the canton of Schaffhausen.

It is indeed not surprising that the cave-dweller of those days took his models from the ranks of the animal creation. All his thoughts and efforts were directed to the chase; he had no resources but in this pursuit, and

he had to carry on, day and night perhaps, a fierce struggle for existence with wild beasts. One can thus follow the development of the human race through the course of time from the primitive sketches of beasts down to our own days, in which it has been reserved for the hand

HOTTENTOT HUNTERS—A SKETCH DATING FROM 200 YEARS AGO.

(Some South African tribes actually hunt the lion on foot with javelins, and I have myself more than once observed the courage of the East African natives in similar circumstances.)

of man to execute masterpieces inspired by genius, and in which man makes the sun to serve him in depicting and preserving representations of all that lives and moves, creeps and flies. By means of the sketches of animals laboriously scratched on pieces of ivory by the Cave men

of Southern Europe, we make the acquaintance of the long-haired prototypes of the living elephants of to-day. These animals were the most coveted big game in Europe. Clearly recognisable sketches of reindeer tell us that a climate like that of the northern steppes prevailed at the time; others of horses show that the wild horse was then to be found in Europe; those of the aurochs prove the existence of that animal. There is a remarkably close resemblance between the style of all these drawings and that of the rude sketches made by the Esquimaux of our own day. Some such Esquimaux sketches of animals on walrus tusks, at the most a hundred years old, are to be found in the Berlin Ethnographical Museum. Interesting, too, are the sketches of giraffes from the hands of ancient Egyptian artists. They show us that the artist of those days in drawing animals allowed a loose rein to his fancy and imagination. Thousands of years must separate these representations of animals from the sketches of Asiatic wild life which Sven Hedin discovered at Togri-sai-Tale near Lôb-nor. They are scratched on bright green slate, and depict yaks, wild asses and tigers, and the hunting of them with bow and arrow. They appear to be of the same kind as the animal-sketches made by the South African Bushmen, discovered by Fritsch in the year 1863. These cave pictures show us various members of the fauna of Cape Colony, which has already been to so great an extent exterminated. During the period of the Middle Ages a more perfect style of representing animals was gradually evolved, but even about the year 1720 we find representations that are inaccurate to an incredible extent,

ANCIENT EGYPTIAN REPRESENTATIONS OF GIRAFFES AND OTHER ANIMALS. (THE BIRD AT THE TOP ON THE LEFT IS PLAINLY RECOGNISABLE AS THE SHOE-BILLED STORK—*BALAENICEPS REX*. NOW IT SEEMS ONLY TO BE FOUND IN THE MARSHES OF THE UPPER NILE. I HAVE TO THANK PROFESSOR HOMMEL OF MUNICH FOR THESE ILLUSTRATIONS, WHICH ARE TAKEN FROM "MONUMENTS ET MÉMOIRES DE L'ACADÉMIE DES INSCRIPTIONS ET BELLES-LETTRES.")

and, indeed, so recently as the early part of last century, one sees in the travels of the French naturalist Le Vaillant, in the picture of a female hippopotamus, a proof that the development of animal-drawing had as yet made little progress.

But what a difference in drawing and technique has come about in less than a hundred years! One need only

SKETCHES OF ANIMALS MADE BY THE BUSHMEN. (DISCOVERED IN SOUTH AFRICA BY PROFESSOR G. FRITSCH IN THE 'SIXTIES, AND REPRODUCED BY HIS KIND PERMISSION.)

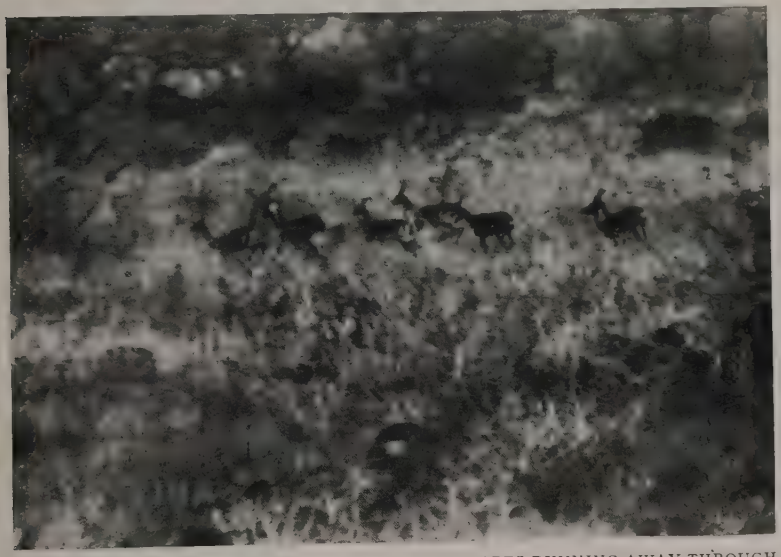
compare the pictures of those times with the works of our own days, to be convinced that, besides artistic execution, there is now an increasingly exacting demand for the precise truth. Indeed, one of the first points to be insisted on is that photographic pictures *shall not be altered, worked up—in a word, in any way "retouched."* Only on this condition can they really claim to be—that which

in a special sense they ought to be—*true to nature, absolutely trustworthy "nature-documents."* This distinguishes the photograph from works of art executed by the hand of man, which must conform to each individual conception of the artist.

It is a hard saying that the modern cultured man is becoming continually more and more estranged from nature. But in this matter let us take the standpoint of the optimist, who says to himself that there must be a reaction—a conscious, deliberate return, which indeed will represent the result of the highest stage of culture. There is an increasing perception of the existence in our home landscape of an ideal worth, that we have not yet been able sufficiently to estimate. To-day already there is a movement on all sides, and the demand is heard, ever stronger and clearer, for the protection of the beauties of nature. We must protect Nature in the widest sense of the word. And even if, in the stern progress of evolving civilisation, much that remains in the treasury of primitive nature must be destroyed, we shall be able long to preserve and rejoice in much else.

And here come into play the healthy desire of man in his primitive state, the cry for light and air, and all the beauty of nature. It is hardly a hundred years since we in Europe learned to value the landscape beauties of unspoilt nature. English writers of travels a century ago still spoke of Switzerland with aversion; it was for them a horrible, dismal mountain country. And it is easy to understand how man in his hard struggle for the necessaries of life regarded, and was forced to regard,

nature around him as on the whole unfriendly and menacing. But since those times there has been a change for the better, even though it cannot be denied that many men require very specially adjusted spectacles to enable them to enjoy this or that beauty of the nature around them! Thus the landowner feels a pleasing



A SMALL HERD OF FEMALE BLACK-TAILED ANTELOPES RUNNING AWAY THROUGH HIGH GRASS.

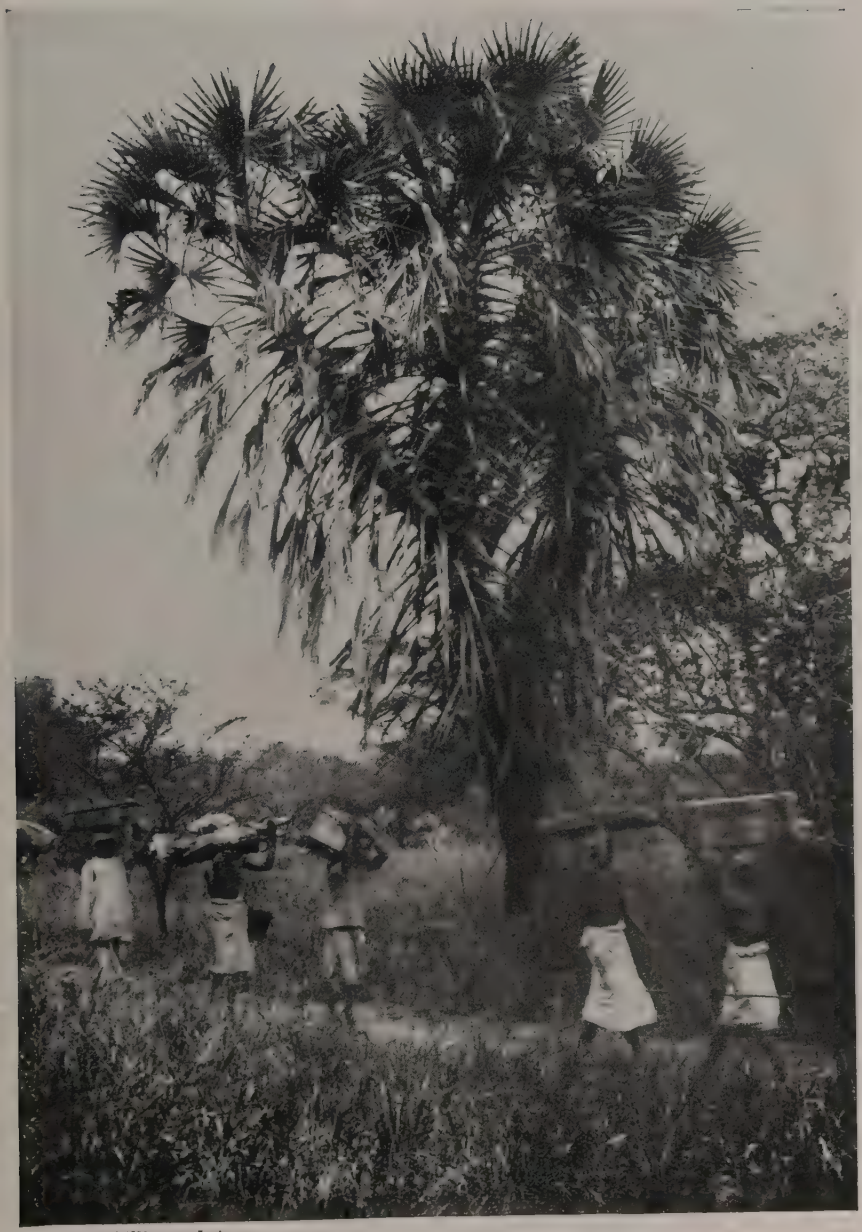
satisfaction at the sight of his cornfields. And yet these cornfields are hardly anything else but an artificially formed bit of bare velt, on which at certain times a short-lived vegetation grows up, whilst at other times the naked soil presents itself to the eye—uninviting, stripped of all adornment, arid and empty. Thus, too, the man who loves wine feels that well-cultivated vineyards are a beautiful sight; but it may be doubted whether he would

do so if, say, only cotton-pods grew on the vines! In ancient times, as Humboldt shows, with the Greeks and Romans, as a rule, only country that was "comfortable to live in" was called beautiful, not what was wild and romantic. Yet Propertius[1] and many others praise the beauty of nature left to itself, in contrast with that which is embellished by art. Then we have a long way to travel through the Middle Ages, when the Alps are described to us as "dismal" and "horrible," till we come to the nature-studies of Rousseau, Kant, and Goethe. At first there were very few to sympathise with them. Their view gradually prevailed, in spite of many backward eddies. Thus Hegel had only one impression of the Swiss Alps, that of a performance tiresome on account of its length—a judgment not far removed from that of the Savoyard peasant who declared that people who took any interest in snow-covered mountains must be insane.

On the other hand, we find in Eastern Asia, and especially among the Japanese, from the earliest times, the most ardent love for nature, and there even the poorest knows how to adorn his home with flowers, and to turn the beauty of the landscape to similar account.

A great part of the interest felt in natural beauty is perhaps to be traced to extraneous considerations. On the other hand, here in Germany we see most of our people full of feeling for our glorious forests and for our German scenery in general. We have to face the prospect, however, of a silenced countryside—a countryside

[1] Cf. Friedlander, *Darstellungen aus der Sittengeschichte Roms.*



C. G. Schillings, phot.

BEARERS ON THE MARCH.

without song or music.[1] That is a matter for anxiety. Insects, birds, quadrupeds, life and movement should be a part of the landscape. This idea should continue to attract more and more adherents. German thought and feeling are altogether in unison on this subject, and it is to be hoped that the cry for the protection of the beauties of nature, for the preservation of the plant and animal worlds, and all that is picturesque in our native landscape, may continue to find expression. The League for the Preservation of the Homeland in Germany gains daily new supporters.

Men like Professor Conwentz and many others have been working for years in this direction, and carrying on a most successful propaganda. This action for the preservation of the Homeland, taken in the highest and broadest sense of the word, must tend to evoke and foster the love of nature and its beauties in ever wider circles.

In other countries, too, steady progress is being made towards the same goal, and the importance of these considerations has long been recognised. In England and in America a way has recently been found to give practical effect to the idea of the protection of the beauties of nature by measures well calculated for this end. In this connection, too, a refined æsthetic culture is gaining ground. I do not at all close my eyes to the difficulty of regulating the conditions bearing on this matter. But in this connection we must not shrink from decisive

[1] In the market of Nice alone, according to official statistics, from November 1, 1881, to the beginning of February 1882, 1,318,356 little song-birds were put up for sale.

measures. Those who come after us will be the first to prize and esteem these measures at their full value.

What I have here described as something to be desired and worth striving for at home must also hold good for the whole world—the preservation of all that is characteristic, all that belongs to primitive nature, wherever it is to be found.

The beauties of nature are most abundant, and in our time they are all—all—threatened with destruction and in need of protection. Where we can save and preserve any of them, our hands should not remain idle.

But where this is not possible, let us secure "nature-documents," paintings, representations of all kinds as true to life as may be.

In this way we shall, at least, save for future ages memorials of enduring worth, for which our children's children will give us thanks.

A RHINOCEROS MOVING SLOWLY THROUGH THE GRASS OF THE VELT—TAKEN WITH THE TELEPHOTO-LENS AT A DISTANCE OF 120 METRES, AND WHERE THERE WAS NO COVER. THE ANIMAL LOOKED REMARKABLY LIKE AN ANT-HILL. ON ITS BACK ONE SEES A BIRD—(*BUPHAGUS ERYTHRORHYNCUS*, Stanl.)—HUNTING FOR TICKS.

III

New Light on the Tragedy of Civilisation

THEODORE ROOSEVELT, President of the United States of America, says in his lately published work, *Out-door Pastimes of an American Hunter:* "The most striking and melancholy feature in connection with American big game is the rapidity with which it has vanished."

He makes a critical investigation of this disturbing fact, and he most strongly advocates restrictive laws and the establishment of reservations for wild animals. He puts himself at the head of every effort directed towards the protection, as far as may be, of the animal world and of wild nature, and shows by word and deed how even in a brief period remarkable results can be obtained in this

direction. At the same time, on every page of his striking work, the President shows that he is in favour of the practice of the chase within proper limits, and thus he by no means takes the side of extreme partisans in this matter. His efforts are of the greatest service to the cause, and will no doubt have extremely valuable results in the United States, where, owing to its peculiar circumstances, the natural treasures of the country were, till very lately, recklessly wasted.

The establishment of the Yellowstone National Park was largely the President's work. In this vast territory no shot may be fired. It forms an inviolable national sanctuary, within whose boundaries life of all kinds is safe. Several similar reservations are already established, or their establishment is projected. Strict protective laws have been some of them brought into operation throughout the States, and some of them gradually extended to various districts according to their circumstances. Whole tracts (as, for instance, Alaska) have been closed for years by law against the hunter. In short, a period of thoughtless ravage has been followed by an era of self-control with a swiftness that no one would ever have expected under the conditions prevailing in America.

The facts I have noted give one something to think about. When in such vast regions of the world measures of this kind are found to be necessary, there must have been strong grounds for them. And, in fact, primitive nature and all its glories were in as serious peril in the United States as in many other parts of the world. The cutting down of enormous stretches of forest, and

the destruction of the stately representatives of the animal world, went on at giant speed in the United States. The almost complete extinction of the splendid American bison, that once roamed in millions over the prairies of the United States, is one of the most startling facts illustrating the destruction of wild animals through the introduction of civilisation. This fact had no slight influence in procuring the enactment of severe measures.

In a land like the United States such measures are possible, advantageous, and practicable. In other countries, too, which are in a settled condition, similar regulations have everywhere come into force of late years. Thus, for instance, the remnants of the fauna of Australia are now protected by stringent laws. But quite different, and much more difficult, are the conditions of the problem with regard to Africa. There, more than anywhere else, the time has come for protective regulations. But how can these measures be enforced, however well they may be thought out? We must keep before our eyes the terrible example of the disappearance of the animal world of South Africa, as the result of the extremely rapid spread of civilised life. We can now, with the help of statements made by trustworthy writers, survey the various phases of this utter destruction of animal life during the last century, and so form an idea of what awaits other parts of the Dark Continent.

Powerful voices have been raised of late in favour of the preservation of African wild life, and this especially in England. In this respect, Mr. Edward North Buxton is most prominent in pressing for thorough measures

of protection for the African fauna throughout the wide possessions or spheres of interest of the British Empire. In England, too, many strong pleas have been made in support of the view that even relatively speaking noxious animals should not be deprived by man of the right to a certain amount of protection. Thus Sir H. H. Johnston, the former Governor of the Uganda Province in Central Africa, says in his preface to the English edition of my book *With Flashlight and Rifle*, that in his opinion the weasel, the owl, and the primitive British badger of the existing fauna ought not to be entirely sacrificed to the pheasant—a beautiful enough bird, but, after all, one that must always remain an "interloper"; that the egret, the bird of paradise, the chinchilla, the sea-otter,[1] and such-like creatures are "æsthetically as important," and have the same right to existence, as a woman beautifully dressed in the spoils of these animals. Good pioneer work in this direction must result from the noble-hearted resolve of the Queen of England to put herself at the head of the "Anti-Osprey Movement," organised to save the royal heron from threatened extinction.

There can be no doubt that the complete extermination of any species of animal must excite in the mind of a reflecting man a sense of injustice and wrong; and that this complete destruction of certain species can only be to the interest of all men in general when such animals, of whatever kind they may be, are entirely noxious and

[1] Strict regulations have lately been put into force for the preservation of the last-named species. But, as the result of the merciless persecution to which it has been subjected, the sea-otter is all but extinct.

quite useless. No epoch in the world's history can be set in comparison with ours in so far as it has been the witness, in the course of a few decades, of almost daily progress and improvement in connection with industry, culture, and the whole field of human knowledge. And, moreover, no epoch has been so penetrated with the great thoughts of progressive humanity. The continual employment—in ways that are ever more adroit, ever more complex—of all the resources offered by nature to man, seems at the same time to blind him to certain grave misdeeds that he is actually perpetrating every day. These great crimes against the harmony and order with which nature surrounds us—crimes that it is not easy to make any amends for—are the disfigurement and poisoning of watercourses, the pollution of the air, the laying waste of a portion of the plant world (namely, the forests), and the extinction of some of the animals that live with us.

We do not shrink from the most *reckless* exploitation of those forests that have come down to us from the primeval past—the vast stores of coal buried deep in the bosom of the earth. The expert can now calculate with certainty that in a few hundred, at the very farthest in a thousand, years these stores will be exhausted. When it comes to this, the triumphant progress of industrial science will no doubt give us some substitute, perhaps even something better; but no technical knowledge, no science, can ever give us back anew those highly developed organisms of the plant and animal world which man to-day is recklessly sweeping out of the list of living things. They cannot restore to us the green woods and their animal life.

We preserve with punctilious precision every vestige of the art of the past. The older the documents of earlier historic times are, the more eagerly they are coveted, the more highly they are valued. Our collectors gladly pay the largest sums for an old papyrus, an old picture, an object of decorative art, or a marble statue. And, as has been rightly remarked, what warrant have we that some new Phidias, some new Michael Angelo, some new Praxiteles will not arise, and give us something of as high value as these, or even much more perfect? Unreservedly to deny this would be the same thing as to give the lie to the progress of the human race.

But the same man who, in this respect, acts so reverently, so conservatively, looks on with folded arms while treasures are destroyed that ought to be guarded with special affection and care, in these times when the great value of all natural science is so fully recognised.[1]

[1] While this book is passing through the press several correspondents have sent me an article published by Freiherr von Schrötter-Wohnsdorf in the *Monatsheften des Allgemeinen Deutschen Jagdschutzvereins* of August 24th, 1906. According to this article, during the year 1906, by ministerial orders, in four of the chief forest districts of East Prussia, *sixty-seven head of wild elk* were killed off, though hitherto the few remaining living specimens of the elk have been so carefully preserved both on public and private estates. This thorough-going course was adopted for the sake of the preservation of the woods from damage by the animals. That this should have been done in the case of a disappearing species of wild animal, hitherto so carefully preserved, and of which private individuals were allowed to shoot only male specimens, is in open contradiction with those views as to the necessity of protecting the rarer beauties of nature, which are making such progress every day. It seems therefore fitting that I should note the fact here as showing how well grounded is my opinion that the progress of civilised culture is destructive to those treasures of nature that have come down to us from primeval times.

We organise, at an extremely high cost, expeditions to survey and explore far-off regions. We sink into the greatest depths of the sea our cunningly devised trawl-nets, and study with ceaseless diligence the smallest organisms that they bring up into the light of day. We consider the course of the stars, and calculate with precision their remote orbits. We daily discover new secrets, and have almost ceased to feel surprised at each day bringing us something new, something yet unheard of. Much that is thus done to secure the treasures of the past *might equally well be done in coming years. But much that we neglect to do can never again be made good,* for we are permitting the slaughter, up to the point of extinction, of the most remarkable, the most interesting, and the least known forms among the most highly organised of the creatures that dwell with us on our earth!

An example that appeals to us with terrible force is that of South Africa (taking the country in its widest limits), a region now so largely peopled by Europeans. There has been an almost complete disappearance of the larger animals that once lived in their millions on its wide plains. If one studies the trustworthy narratives of the earlier explorers, one reads that, hardly a century ago, it was not a rare sight to see in one day a hundred, or even a hundred and fifty rhinoceroses, hundreds of elephants that showed little fear of man, and countless antelopes; and one asks oneself, How can it be possible that all this abundance of life has vanished in so short a time? A specimen of the "white" rhinoceros, which in those times was still living in large numbers, is in our day worth a

small fortune; it is to be found *in no museum in Germany*, and is simply almost impossible to obtain. This former abundance is now known only to few, and these only specialists engaged in studies of this kind. But to them it is also plain and terribly certain that, where the like conditions come into being, the same process that was at work in South Africa will produce the same results.

There can be no doubt about it. In a hundred years from now wide regions of what once was Darkest Africa will have been more or less civilised, and all that delightful animal world, which to-day still lives its life there, will have succumbed to the might of civilised man. That will be the time when the fortunate possessors of horns and hides of extinct African antelopes, and the owners of elephant tusks, skulls, and specimens of all kinds will be selling all this for its weight in gold. And no one will be able to understand how it was that in our day so little thought was given to preserving as far as possible all this valuable material in abundant quantities at least for *the sake of science*, instead of sacrificing it wholesale to the interests of trade, and to the recklessness of the new settlers in those lands. For these men, who have to struggle hard with the new conditions of life and its necessities, can scarcely act otherwise than heedlessly and short-sightedly. They will always take possession of a district before settled conditions are introduced, and before the Government is in a position to enforce the observance of its regulations, however well-intentioned these may be. So it will come to pass that it will suddenly be found no

C. G. Schillings, phot.

A SCENE IN THE CAMEROONS (GERMAN WEST AFRICA), SHOWING THREE LARGE GORILLAS SHOT BY CAPTAIN DOMINICK.
(PHOTOGRAPH SUPPLIED BY CAPTAIN DOMINICK.)

longer possible to provide European collections with even a pair of specimens of the mighty elephant, or to procure other large animals for exhibition in these establishments. And this will be the case not only with regard to the larger species, but the same thing will happen to all others.

The Queen of England has lately expressed the wish that no lady shall come into her presence wearing osprey plumes in her hat. This act of hers should be most heartily welcomed, for the bird world is being destroyed in a way of which only a few experts have any idea. If our ladies only knew that whole species of birds have become extinct, thanks to the fashion of wearing hats trimmed with birds' feathers, doubtless they would no longer pay allegiance to this destructive fashion. The massacre of birds is carried on in some such way as this. The leading firms agree to make this or that bird fashionable. It is thus that the death-sentence of many rare species of birds is pronounced. The traders scattered all over the world give the hunters who engage in this kind of business directions, for instance, to bring in osprey feathers. And how are they obtained? The royal heron, a timid and beautiful bird, is not easy to stalk. But the businesslike hunter knows what to do. He simply kills the herons in thousands and thousands *at their nesting-places.* Love for its offspring brings the beautiful creature within range of the gun-barrel of the lurking hunter, who kills thousands of the birds in cold blood when they are gathered together in the breeding season. Countless thousands must be killed, countless thousands more of young helpless nestlings, bereft of the parent birds, must

starve to death before enough of these little plumes has been collected to make a load heavy enough to be put on the bearers' shoulders. And now the dealers of the whole civilised world lay in a stock, so that full provision may be made for a form of fashion-mania that may probably last only a few months. Even in the farthest swamps of America, in the lands beyond the Caspian, and wherever the royal heron breeds, one can follow the bird hunter, and see him at his horrible and murderous work. The end is everlasting silence. A rare species is soon utterly destroyed. In the last century alone about two dozen species of birds became extinct. And in these days nearly a dozen more species of birds are threatened with extinction! According to the Reports of the Smithsonian Institute this is notably the case in America with regard to quite as many species. The wonderful birds of paradise are going; the latest "trimming" for the hats of American ladies, these dwellers in remote islands of the Southern Seas are to be threatened in a more serious degree, and probably to a great extent exterminated. Everywhere we have the same lamentable facts! It is certainly high time to interfere effectively. I myself think that the best results would follow from an appeal to all noble-minded women.

In Africa I have already observed an example of the disappearance of one species of bird[1]—every European takes a lot of trouble to get possession of some of the

[1] The author believes that he cannot better give expression to his views as to the preservation of the beauties of nature, than by reproducing an article on the appearance of the stork in the Soldin district, by Herr

much-prized marabou feathers. Now, as long ago as the year 1900, at London, as a member of the International

M. Kurth. He writes in *Die Jagd, Illustrierte Wochenschrift für deutsche Jäger*, May 13, 1906:

"As for the stork-shooting appointed by the District Committee of the districts of Soldin, Landsberg and Ost-Sternberg for the period from March 1 to June 15, it is to be remarked that the opinions held by sportsmen as to the damage done by storks, especially in reference to small game, are very much divided, and that not much can be put to the reckoning of 'Brother Longlegs' of those misdeeds that figure heavily in the accounts of other robbers, such as the crane, the magpie, and all kinds of native birds of prey, and the hedgehog, marten, and polecat. These one and all carry off nestlings, and most of them attack young leverets also. Now if we are to go for the stork, it should of course be done when he is to be found together in too great numbers; and this is entirely the idea of the District Committee. The neighbourhood of Balz bei Vietz on the Eastern Railway has always been remarkable for the number of its storks' nests. One finds two of them on nearly every one of the old barns, a nest at each end of the roof. It was so even thirty years ago, and so it is to this day. But the proprietors of the barns never agree to the nests of the storks being destroyed, or any opposition made to the settling there of these trustful and friendly birds. And for what reasons precisely has 'Friend Adebar' settled in such numbers in this district? Well, here the far-spreading meadows of the Warthe, with their full scope for extended flight, offer him all the food he wants and to spare, and here the frogs' legs must be particularly good. It may be that now and again a young partridge or a leveret strays into Mother Stork's kitchen, but that is the exception. Now if people keep strictly to the object indicated by the District Committee, namely to bring down the numbers of the storks where there are too many of them, one may let it pass. But how many will out of a mere shooting-mania take aim continually at the harmless birds!—though such are never genuine sportsmen. How can this be checked? And it should not be forgotten that in the first week of April our African guests are to be found in hundreds along the Warthe brook, whence they then disperse to various parts of the neighbouring districts. Now it is to be hoped that no one will assume that the stork is to be found here 'in too great numbers,' and that therefore 'one may blaze away at him.' In some years this may possibly be the case, but if he were scared out of the district our landscape would be the poorer by the loss of the

Conference for the Protection of Wild Animals, I did my best to obtain, at least on paper, some measure of protection for the marabou. This bird had not only quite won my heart by its extraordinary sagacity, but for the same reason it was a general favourite even in the times of classical antiquity. My efforts were in vain. And this will mean nothing more or less than the extermination of a large and handsome bird, which is comparatively easy to hunt down, and the rate of increase of which is exceptionally small.

From all these points of view the support of the "League for the Protection of Bird Life in Germany" is to be warmly recommended. In England these reasons have

bird's welcome cry, as has happened in the case of the heron and the cormorant in our district. This last-named bird comes now only seldom, and then only one at a time, to the Netze, near Driesen. There was a heronry formerly near Waldowstrenk in the Neumark district, but it disappeared ten years ago. We must hope that this will not be the fate of the stork, whose appearance has so many links with the poetry of our childhood, and that we shall not be deprived of his presence. What a pleasing sight it is when 'Brother Longlegs' with dignified walk stalks beside the mower at haymaking time, looking so confiding and fearless! And what a joy it is to old and young when the first stork of the season wheels in circles over the homestead, when for the first time he comes down to his old nest, and announces his arrival with a joyful outcry! Must not every sympathetic and thoughtful lover of nature be filled with sorrow and indignation when, on the pretext of petty thefts, but probably out of mere wanton love of destruction, attempts are made to drive out of our country this friendly bird, which is so pleasing an ornament of the landscape? It would really be a crime against the out-door beauty of our native land, and against nature all around us, if out of narrow-minded selfishness we were to extirpate the stork, as happened in recent times to that most splendidly coloured of our birds, the kingfisher, on mere suspicion of its being a 'great destroyer' of fish. Love of nature, joy in nature, is a valuable element in German feeling, and therefore, dear fellow sportsman, let us maintain our good character!"

ONE OF CORNWALLIS HARRIS'S SKETCHES, SHOWING HOW HALF A CENTURY AGO NUMBERS OF LIONS WERE TO BE FOUND TOGETHER IN BROAD DAYLIGHT IN SOUTH AFRICA. I HAVE SEEN SIMILAR GATHERINGS IN EAST AFRICA, NOTABLY ON JANUARY 25, 1897. HARRIS'S SKETCH SHOWS THE GREAT DEVELOPMENT OF THE MANE IN THE NOW NEARLY EXTINCT

brought about the formation of the "Society for the Preservation of the Wild Fauna of the Empire," which devotes itself to the protection of animal life in general throughout the world-wide British dominions.

Let us now follow a little more closely, under the guidance of English writers, the process of the extermination of the South African animal world. This lamentable work was completed very rapidly in the course of only something like a hundred years. From numerous English authorities, as well as from the publications of the Society already named, I have been able to ascertain that the last "blaauwbok" was killed by the Boers in Cape Colony about the year 1800. From extant sketches of this wild animal, it appears that it was a smaller species of the splendid horse-antelopes still to be found in other parts of Africa. During the following seventy-five years the extermination of several other kinds of animals was systematically carried out; and exactly eighty years later the last quagga, a kind of zebra (*Equus quagga*) was killed by the Boers. In England there is only one single specimen preserved, and that in a very poor condition. It is to be found in the British Museum. A further sacrifice to the advancing Europeans was the giant, wide-mouthed, "white" rhinoceros (*Rhinoceros simus*, Burch.), a mighty creature, that formerly ranged in thousands over the grassy plains of South Africa. The length of a horn taken from one of them is given as 6 ft. 9 in., English measurement! Even as late as the year 1884, a single trader was able to pile up huge masses, small hills, of these rhinoceros horns by equipping some four hundred tribesmen of the Matabele

race with guns and ammunition and sending them out rhinoceros-hunting. Now it is difficult to get even a few specimens of this animal for the museums, and they are almost worth their weight in gold. Information lately obtained seems to indicate that a very small number of these mighty beasts, probably not more than thirty-five in all, are still living their life in the midst of inaccessible swamps in Zululand and Mashonaland, in a district that, on account of its deadly climate, is almost closed to Europeans. However, the Government of Natal has, I am pleased to say, made the killing any animal of this species, without legal permission, a crime to be punished by a fine of £300.

An English officer, Captain (afterwards Sir) William Cornwallis Harris, is an authoritative witness as to the extermination of wild animals in South Africa in 1836, though it must have been going on for a long time before that without any written record. The Boers must have slaughtered hecatombs of wild animals, though up to that date we have no first-hand written evidence on the subject.[1] Their proceedings were precisely of the same character as the events that have occurred in our own day in

[1] We are indebted to the English hunters of those days for all the information we possess as to the wild life of South Africa at that time. If there had not been amongst them men who knew also how to handle the pen, we should have been almost entirely without trustworthy information as to that period. I may take this opportunity of saying a word for the English "record-making sportsman," who is not unfrequently the subject of false and unfounded invectives, which I can only describe as mostly full of fanciful fables. Other lands, other ways, and there are black sheep in every nation. In any case we may take English ideals of sport as our example, and also the regulations drawn up by English authorities for the protection of the animal world.

connection with the destruction of the elephant, the rhinoceros, and other animals throughout Africa. This destruction goes on silently, and only a few men who have a special knowledge of the circumstances bring some information about it to the world at large. The rest keep silence, and mostly have good grounds for so doing.

The descriptions given by Harris, Oswell, Vardon, C. J. Anderson and their contemporaries give some idea of what enormous multitudes of wild creatures then wandered over the plains of South Africa. We are inclined to underestimate the abundance of the fauna of earlier epochs. The process of animal-destruction by the hand of man has been going on from immemorial times. For thousands of years man has been continually pressing the animal world back more and more, and it has had to give way in the unequal struggle. This process has been going on so slowly and so imperceptibly that it is only by the scanty remnants left from earlier times that we can form some estimate of the wealth that has disappeared. These are no empty fancies. All the lonely far-off islands of the world's seas, the little visited Polar lands, and all the uninhabited steppes and wildernesses give us evidence of this. Not only from the lips of Cornwallis Harris, but also from some of his contemporaries, we have descriptions of the former abundance of wild life in the Cape districts of South Africa. At that time the country was, in the literal sense of the word, covered with countless herds of Cape buffaloes, white-tailed gnus, blessbock, bontebock, zebras, quaggas, hill-zebras, hartebeests, eland-antelopes, horse-antelopes, oryx-antelopes, waterbuck, impallah-antelopes,

springbocks, and ostriches. Herds of hundreds of elephants were to be seen. Every marsh, every river-bed, was literally overcrowded with hippopotami. All other kinds of animals that are now so scarce, such as the large and handsome kudu, and all the different kinds of small wild animals, were to be met with in vast numbers. Although since the year 1652 South Africa had been to a continually increasing extent occupied by the Boers, all these wonderful things had managed to survive in rich profusion up to the moment when, about a hundred years ago, the great war of extermination began. Various causes contributed to bring this about: the increasing numbers of the settlers, their continual penetration farther and farther into the interior, and, above all things, the improvement of firearms.

The natives, although very numerous in South Africa, had, as happens everywhere, left the animal life of the country in its abundance to the Europeans, who were overrunning the land in increasing numbers. It was reserved for these to bring the war of extermination to an end in a short time. Truly a melancholy spectacle!

Wilhelm Bölsche describes all this in fitting words:[1] "In Africa," he says, "a wonderful drama is to-day unfolding itself before our eyes. It is the downfall of the whole of a mighty animal world. What is being destroyed is the main remnant of the great mammalian development of the Tertiary period. Once it spread in the same fulness over Europe, Asia, and North America. Now in its

[1] In a review of my book *With Flashlight and Rifle* (German edition).

SKETCH OF A HERD OF ELEPHANTS IN SOUTH AFRICA, BY HARRIS. IT GIVES AN IDEA OF THE ABUNDANCE OF ELEPHANTS IN THE CAPE DISTRICTS SIXTY YEARS AGO. THIS EXPLORER'S SKETCHES GIVE A TRUE PICTURE OF THE LANDSCAPE AS WELL AS OF THE ANIMALS.

last refuge this most wonderful wave of life is rapidly ebbing away. Everything contributes to this result—human progress, human folly, and even disease among the animals themselves."

To give an example: Through the trifling fact that we have ivory balls for billiards, the African elephant goes to destruction. The individual cannot stop this; but what he can do is to secure more material for each special branch of science before the door is closed, and to once more observe in their primeval surroundings the last elephants, wild buffaloes, giraffes—those last living vestiges of the Tertiary period.

But above all, the sketches of Le Vaillant, a French explorer, who, about 1780, set out from Cape Town on his travels into the interior, are of great importance for our study of the former abundance of animal life in South Africa. They are all the more interesting for German readers because he traversed part of what is now German South-West Africa, and gives in his book an account of its condition at that time. He, too, tells of absolutely incredibly great multitudes of wild animals; on the banks of the Orange River he comes upon great herds of elephants and giraffes, and he cannot find enough to say of the astonishing wealth of animal life. For those who know German South-West Africa, his narrative is of special interest. He formed large collections which he brought back with him to his native country, and to all appearance is a fairly trustworthy authority, though at the same time, like many contemporary and later travellers, here and there he makes assertions that are

clearly unwarrantable. For instance, in one place he tells how he once rode a zebra, that he had wounded, for a considerable distance, back to his camp.

Some fifty years later, at the period of the journeys of Captain William Cornwallis Harris,[1] as I have already remarked, the same conditions prevailed, with regard to the abundance of wild animals, as in the days of Le Vaillant. It was almost a daily experience for the traveller to be molested by lions. The Vaal River then teemed with hippopotami. What is now the site of Pretoria was inhabited by a number of rhinoceroses, that were absolutely an annoyance to the explorer: "Out of every bush peeped the horrible head of one of these creatures." Of the neighbourhood of Mafeking he tells us that the gatherings of zebras and white-tailed gnus literally covered the whole plain; that with his own eyes he had at one time seen at least fifteen thousand head of wild animals! In another place he tells us of an absolutely overwhelming spectacle. He saw at the same time more than three hundred elephants; to use his own expression, the plain looked like one undulating mass.

William Cotton Oswell, whom I have mentioned in my earlier work, and who died as lately as 1893, knew the countries of South Africa in the days of Livingstone, and gives the same account of them as his predecessor Harris. He once came upon more than four hundred

[1] Sir William Cornwallis Harris must be considered as a quite trustworthy authority. His works are indeed the most complete first-hand evidence we have as to the state of the fauna of South Africa at the time.

elephants gathered together in one herd on the open velt. Unfortunately, like so many others, he published very few sketches.

Gordon Cumming, a traveller well known to the German public through Brehms' *Tierleben*, has also left us sketches of those days that corroborate the descriptions given by his contemporaries. He tells how, in the year 1860, a great drive was organised in the Orange Free State in honour of the Duke of Edinburgh, afterwards Grand Duke of Saxe-Coburg-Gotha. The number of wild animals driven together by the natives, which included zebras, quaggas, gnus, cow-antelopes, blessbock, springbocks, and ostriches, was estimated at five-and-twenty thousand. The number killed on this one day was reckoned at about six thousand animals, and a number of natives were trampled to death by the herds of wild beasts.

At this time there were still Europeans in South Africa who made elephant-hunting their ordinary business. Now there are neither elephants nor indeed any other kind of wild animal in numbers worth mentioning in these once rich hunting grounds. They have all been killed off in the course of a hundred years. Where once hundreds of thousands of gnus lived their life, there are now only a few hundred specimens carefully preserved and guarded. And the same is the case with all other wild animals. Many species are gone completely and for ever. *A similar process will go on slowly but surely throughout the whole of Africa, wherever civilisation penetrates. There is only one chance of the beautiful wild life of Africa being*

permanently preserved, and that lies in the hunters themselves consenting to protect and spare it.

It has been rightly remarked by such a competent authority as A. H. Neumann (who is, moreover, one of the most experienced of English elephant hunters) that the continued existence of many wild African species is not incompatible with the progress of civilisation. He points out that we can only reckon with some degree of certainty on the effective preservation of wild animals, where not only reservations have been established for them, but where also a considerable amount of control can be exercised over both Europeans and natives. In his opinion, for instance, a mere regulation forbidding the shooting of female elephants is impracticable: "I should like," he says, "to see one of those who have drawn up such a regulation come into the African bush, and there show us how we are to distinguish between female and bull elephants in these impenetrable thickets."

In the British colonies in Africa reservations for wild animals have been established with most successful results. Those of British East Africa, the Sudan and Somaliland, and finally of British Central Africa, taken together, have about five times the area of the Victoria Nyanza.

By means of reports made as carefully as possible by the district authorities, estimates have been obtained of the numbers of existing wild animals. In the laying out of the reservations the very migratory habits of the African fauna have been taken into consideration as far as is practicable, and by strict protective regulations of

C. G. Schillings, phot.

GROUP OF WILD ANIMALS AT HAGENBECK'S ZOOLOGICAL GARDENS AT STETTINGEN, NEAR HAMBURG. THE ANIMALS LIVE IN OPEN SPACES ARRANGED TO REPRESENT THEIR NATURAL SURROUNDINGS, AND THE SPECTATORS ARE PROTECTED BY WIDE TRENCHES AND GRILLES. HERR HAGENBECK IS SEEN ON THE LEFT.

various kinds most satisfactory results have been secured. In the Transvaal Colony, too, a reservation has been marked out in the Barberton district between the Olifant River and the Portuguese frontier. Any one shooting in this reservation without a permit is liable to a fine of £100, or six months' imprisonment. There is a very interesting official report as to the wild inhabitants of this reservation. "It contains one old rhinoceros (with shot-marks on its hide), a small herd of elephants, a considerable supply of ostriches, from five to nine giraffes, a satisfactory quantity of gnus, and also of 'black-heeled' or impallah-antelopes, two or three small herds of buffaloes, several herds of zebras, numerous waterbuck and kudus, and a small number of horse-antelopes. On the other hand, whether oryx-antelopes and eland are still to be found there appears to the author of the report in the highest degree doubtful."

However, in the extensive reservations that have been established in other British possessions in Africa, and especially in those of the Sudan, a large number of the beautifully formed dwellers of the wilderness still live their life, and this must be a delight to the heart of every sportsman.

It is to be hoped that through thus establishing "sanctuaries" (as the English call them), with the consequent supervision, a means has been found of protecting the indigenous wild life of Africa, as well of America, for a long time to come.

In German colonies, too, efforts are being made to preserve, as far as possible, the native fauna. The more

our views can be made clear, the more complete the survey of this difficult subject can be made by the combined experience of many experts being gradually brought to bear together upon it, the sooner may we anticipate satisfactory results from this co-operative action. For years I have been following with close interest everything connected with this question, and my wide correspondence with officers, officials, and private individuals warrants me in concluding that on all sides there is an energetic movement in progress. Of course, we have to face serious difficulties in such a campaign. Thus it seems, according to numerous and trustworthy reports, that the attempt to establish Boer settlements in the Kilimanjaro district in East Africa has had, and still is having, very fatal results for the once splendid wild life of that region. And, indeed, it is no easy matter to reconcile a colony of Boers—the people who have already made such a clean sweep of the wild life of South Africa—to the preservation of the fauna of the country. One can see how difficult the regulation of these matters is for the authorities.[1]

We must not forget also that, as a result of the wonderful improvements in firearms, the problem of the protection of wild animals presents itself to-day in quite a different fashion from that of the days of the hunters of fifty, or even of twenty-five years ago.

But it is not the individual hunter whose interest lies

[1] On the part of the Government and the local authorities everything that is possible is being done to settle this difficulty. But unfortunately their efforts seem to have little success.

in sport or science[1]; it is not the man who brings us the first knowledge of many of the inhabitants of the wilderness, and first arouses our interest in them; it is not such as these who should be regarded as the destroyers of the fauna of a foreign land. Rather this is the work of all those powerful influences that everywhere combine to this end during the introduction of civilised life. It has indeed been already proposed, in all seriousness, by some men of science to completely extirpate the wild animals of East Africa, in order thus to circumvent the tsetse fly and other minor pests that may perhaps communicate disease from the wild to the tame cattle. And this, too, before it can be said with any certainty whether these cases of infection do not arise only from a number of very small animals which it would be impossible to exterminate!

Our most important task is now to obtain an accurate knowledge of the fauna of foreign lands. For this purpose we must collect materials which will render the study of this wild life of other lands possible to our scientific institutions; which will place them in a position to give to a wide public an idea of all these rich treasures, and thus awaken an intelligent love for them in the hearts of the pioneers of civilisation.

And then we must devise practicable measures of protection. This is a wide field of labour. The hunter

[1] Cf. my book *With Flashlight and Rifle*, p. 736, where a statement by Professor P. Matschie, the Custodian of the Royal Zoological Museum at Berlin, will be found, bearing out the truth of what is here remarked.

himself must take in hand the intelligent preservation of the wild animals. The measures of protection must be suited to the varying conditions of the wide hunting grounds of foreign lands, and must not be considered only from the stay-at-home point of view.

This is not to be done by mere laments over the extermination of wild life, or even by merely putting limitations on the enjoyment of the chase by the individual hunter. On the contrary, a beneficial result can be obtained only by all European travellers in those countries interchanging their experiences, collecting material, and exerting themselves to the utmost and in concert to devise measures that will, as far as may be, put a stop to the threatened extermination.

This is a great and noble task.

YOUNG GRANT'S GAZELLES ON A BLACK-BURNED STRETCH OF VELT.

IV

The Survivors

TO learn to know anything with precision, to devote oneself to it and master it in its smallest details, one must generally make its study a labour of love. So the spread of more exact knowledge of the manifestations of nature around us must go hand in hand with the awakening of love for them and for the splendours they present to our view. And with this increasing impulse towards research and knowledge must come the desire to prevent as far as possible the rapid destruction of fauna and flora. Public opinion, in truth, has begun to range itself on the side of these much menaced glories of nature.

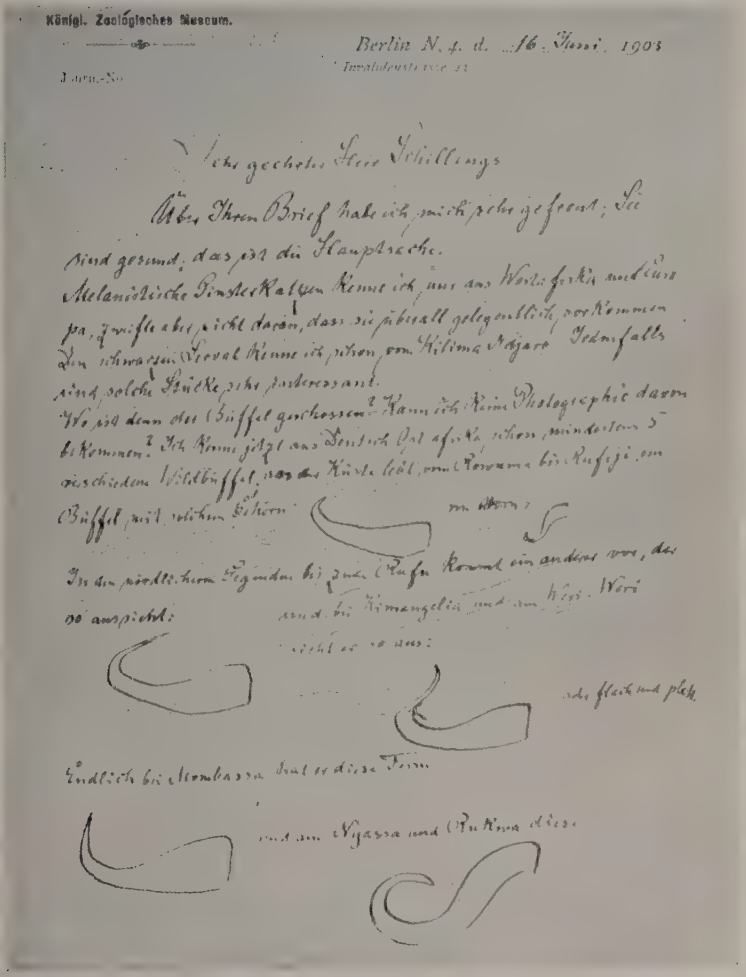
We have to observe and investigate. We have to get together some small portion of the vast material that is often so uselessly squandered, in order to employ it in the service of special branches of science, and to make some closer knowledge of these things accessible to every one.

We have to establish great collections formed on a definite

GROUP OF 'MBEGA MONKEYS, WITH THEIR WHITE-COATED YOUNG (FIRST DISCOVERED BY THE AUTHOR).

plan, and everywhere to save as much material as possible for scientific and educational purposes, so long as it can still

be done. "If these ideas could be brought home to the


Königl. Zoologisches Museum.

Berlin N. 4. d. 16. Juni 1903

LETTER FROM PROFESSOR P. MATSCHIE, THE LEADING AUTHORITY ON THE DISTRIBUTION OF THE MAMMALIA OF GERMAN EAST AFRICA.

right quarters, millions would be made available for this object," writes one of the most learned specialists in these

matters. Our zoological gardens and museums are already doing their best, but they are hampered by the want of pecuniary resources. Whilst the largest sums are freely provided for the purchase of antiquities, there is a dearth of means for doing what is necessary to save the treasures of our vanishing fauna while there is still time!

Other countries, America for instance, set us a glorious example. There you see public collections formed, affording panoramas of animal life so splendid, so beautiful, and planned on such grand lines, that the love of nature must be lighted up in the hearts of all who visit them.

What can be saved of these disappearing treasures must suffice for all time, and must in part at least be preserved in fire and thief-proof "zoological treasuries," for it will be impossible to obtain such things again in the future, no matter what efforts may be made. Thus a great and difficult task presents itself to our museums. We can rightly require of them that they shall not merely exhibit the principal species of the animal world, but that they shall also preserve specimens of the most striking representatives of our still surviving fauna that are likely soon to become extinct. And these specimens must be guarded by all the resources of art and science against light and any other influence that might injure them. For such a far-seeing policy posterity will be grateful to us.

It seems, however, as though some unlucky star presided over the collecting of the larger species of the animal world. Let any one devote himself to these special pursuits and objects, and even if he win thereby the approval of experts and of wide circles of the public, still a certain odium will

C. G. Schillings, phot.

A 'MBEGA (*COLOBUS CAUDATUS*, Thos.)

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THREE NEW VARIETIES OF EAST AFRICAN WILD BUFFALOES: *BUBALUS SCHILLINGSI* Mtsch. spec. nov., FROM THE MIDDLE PANGANI, LAKE DJIPE, MOMBASSA; *BUBALUS NUHAHENSIS*, Mtsch. spec. nov., FROM UPOGORO, 'NDEMA, 'MBARAGANDU AND THE UPPER RUAHAIS; *BUBALUS WEMBARENSIS*, Mtsch. spec. nov., FROM THE TSHAIA MARSHES IN THE SOUTHERN WEMBERE STEPPE. THE ILLUSTRATIONS SHOW HOW GREATLY THE FORM OF THE BUFFALO'S HORNS VARIES IN DIFFERENT DISTRICTS, AND GIVE A PROOF OF THE IMPORTANCE OF SCIENTIFIC COLLECTIONS FOR EACH SEPARATE REGION.

I have to thank Professor Matschie for the two lower illustrations.

seem to attach to him. Obviously he must kill a certain number of animals, that are often *quite unknown* till then, and in almost every case have been *hardly studied* at all, in order that he may add them to the collections belonging to his native country. He gains the gratitude of science and of the learned, but he has to encounter the prejudices of others. People think that they are justified in throwing upon him, the scientific collector, the reproach of being an exterminator.

Those who speak thus completely forget that it was through the material thus placed before their eyes that they themselves obtained their very first knowledge of these beautiful creatures; that till then they hardly took any interest in such things; and that it is only by means of knowledge secured in this way that regulations for the preservation of these beauties of nature can be devised.

Let us suppose that every museum and scientific collection in the world were provided with a series of specimens of all the varieties of the animal world that are now most seriously threatened with extinction; let us further suppose that each of these institutions secured, besides, duplicate series of the hides and skeletons of each species. To make a striking comparison, all this, beside the wholesale destruction of the animal world of which we have to complain, would be like a week-end sportsman perhaps killing one hare during his whole life compared to the millions of hares killed every year in Germany.

If a species is already reduced to such a state that the taking of a few hundred, or even a few thousand, specimens

for scientific purposes will exterminate it, we may say

MODERN METHODS OF TAXIDERMY: SETTING UP

generally that, even without this proceeding, it is inevitably doomed to extinction. But the wretched egg-collecting

by youths, for instance, is quite a different matter.

ONE OF MY SPECIMENS IN THE MUNICH MUSEUM.

Certainly there must be a great deficiency, when continually, year after year, wood and meadow are searched

for birds' nests by thousands of boys. This is obvious,

THE COMPLETED SPECIMEN IN THE MUNICH MUSEUM (*GIRAFFA SCHILLINGSI*, Mtsch.).

and thus the rarer species are threatened in their very existence.

Great stress ought always to be laid upon the point to

ANOTHER OF MY SPECIMENS IN THE STUTTGART MUSEUM.

which I have here called attention, and I can appeal to every expert on the subject for confirmation of my opinion.

I think that I have earned a special right to speak on this matter. For the last fifteen years I have hardly ever carried a gun when at home in Europe; I have refused the most pressing invitations to shooting parties; and I have sought pleasure only in the sight of our native wild animals, which I know so well, and in secretly watching

PHOTOGRAPHIC STUDY OF A MALE GIRAFFE GAZELLE (*LITHOCRANIUS WALLERI*, Brocke) SHOT BY THE AUTHOR. AN EXTREMELY BEAUTIFUL AND RARE SPECIES, FIRST SEEN BY THE AUTHOR IN GERMAN EAST AFRICA IN 1896.

and observing them. But in the midst of a yet unstudied foreign fauna, of which we still know little or nothing, where there is question of first obtaining some scanty knowledge oneself, and forming collections for definite scientific research—in the midst of an animal world of this kind I would not hesitate to shoot even large numbers of each species. For there would be good reason for not merely

DWARF ANTELOPE IN THE CARLSRUHE NATURAL HISTORY MUSEUM.

GROUP OF GIRAFFE GAZELLES (IN THE AUTHOR'S POSSESSION) PREPARED BY ROBERT BANZER OF OEHRINGEN. THE ONE ON THE RIGHT IS SHOWN IN ITS CHARACTERISTIC ATTITUDE WHEN BROWSING ON TREES OR BUSHES.

GROUP, ALSO PREPARED BY BANZER, SHOWING A SNOW-WHITE "BLACK-HOOFED" ANTELOPE, ATTACKED BY A BLACK SERVAL AND TWO OTHERS.

A SPECIMEN OF THE NEW SPECIES OF HYENA DISCOVERED BY THE AUTHOR IN GERMAN EAST AFRICA (*HYENA SCHILLINGSI*, Mtsch., NATURAL HISTORY MUSEUM, LONDON).

securing well-developed male specimens, as the hunter does, but also females and young animals in all the various stages of growth and colouring. This must be obvious even to a child, and no one will deny to science the right so to act, at least in those regions of Africa which—in comparison with India and other countries—are still untouched by civilisation, and which therefore, in their primitive unchanged condition, afford us doubly interesting results. Now supposing one has got together large collections, and has been so fortunate as to succeed in bringing them down to the coast and home to Europe. A collection of insects or of the lower animals may pass without remark; but woe to the slayer of the larger species of wild animals! These come under the description of "beasts of the chase," and now a peculiar kind of bacillus quickly develops—the bacillus of "hostility to the hunter," which, introduced into Europe from the tropics, finds here, too, a fostering soil. Let me be allowed to endeavour to find a prophylactic against this bacillus in these essays. I have already often laid stress upon the facts that such great quantities of the skins and feathers of birds are exported for the purposes of fashion, that by this trade whole species are threatened with extinction; that every individual European is allowed, without any hindrance, to send home his trophies of the chase—trophies which, with only a few exceptions, can have hardly any value for science; above all, that the extermination of the elephant in Africa is being carried out before our very eyes for the sake of his ivory; and that all this is held permissible. But let one make collections for scientific purposes, and scrupulously hand over every skin,

every hide, with the horns and skull belonging to it, all carefully labelled, to some museum at home, and, according to widely expressed opinion, he is greatly to blame for the destruction of animal life.

Happily in recent years our colonial collections have been considerably augmented. An extraordinarily large quantity of material has been forwarded to the Berlin Natural History Museum, amongst others, by officials, private individuals, and members of the garrisons abroad. Hence valuable results have been obtained for the zoology of these regions. Amongst the satisfactory results of the ever increasing activity in the zoological exploration of the Dark Continent are surprising and repeated discoveries of unknown species of animals, such as the Okapi (*Ocapia johnstoni*) and a black wild hog, till now completely unknown (*Hylochœrus meinertzhageni*, Oldf. Thomas). With the help of these collections, Professor Matschie, dealing with the mammalia, and Professor Reichenow with the birds, have succeeded in establishing the fact that each separate region of the Dark Continent possesses its own characteristic fauna. And most important conclusions with regard to the distribution of animals have thus been derived from these great systematic collections. My friend Baron Carlo Erlanger, the well-known African traveller, and the only one who has ever traversed Somaliland from end to end, though unhappily cut off by an early death, was able to confirm these theories, with reference to the countries he explored, by the ample collections he systematically formed. The whole science of zoology in relation to geography has been turned on to new lines of research,

C. G. Schillings, phot.

DWARF MUSK DEER (*NESOTRAGUS MOSCHATUS*, Van Duben) FROM THE AUTHOR'S COLLECTION IN THE BERLIN NATURAL HISTORY MUSEUM.

C. G. Schillings, phot.

A PAIR OF GUEREZAS (*COLOBUS CAUDATUS*, Thos.). THIS LIFELIKE GROUP WAS PREPARED BY THE SKILLED TAXIDERMIST KERZ, OF THE STUTTGART MUSEUM.

and has given the most important and most valuable results. Everything should be done to support efforts of this kind.

But in this department it is to an increasing extent the duty of our German museums to promote a knowledge of and an interest in the animal world of far-off lands by the display of ample collections, so arranged as to convey instruction. There has already been gratifying progress in this respect, but it is clear that for the development of these ideas we need more extensive, up-to-date buildings for our collections and museums. Other countries, especially England, and above all America, are far in advance of us in this matter. Our zoological gardens have the task of putting the *living* animal world before us. Happily we are doing this by far-sighted methods. To the Zoological Gardens of Berlin belongs the credit of having, to a continually increasing extent, arranged a display of the animal world in appropriate surroundings, and with reference to systematic classification and to its relations with geographical distribution and ethnological science, so far as one can assume the connection or companionship of certain species with man. There we see the disappearing species of wild cattle housed, each according to its peculiar character, in enclosures that are strictly true to nature, and artistically designed. Thus, for instance, the American bison—now hardly to be obtained for its weight in gold—is shown in surroundings that remind us of the North American Indians, these also a disappearing race. The ostrich-house takes us back to the land of the Pharaohs, of which the ostrich was once a characteristic inhabitant, as well as the ichneumon, the crocodile, and the hippopotamus. Then

the class of rodents is brought before us in almost poetical surroundings, that seem quite to justify the German animal stories of the Middle Ages, and that are calculated to produce quite a different effect on the mind from that of a stiffly arranged exhibition of the regulation type, especially in the case of the rising generation. But on account of the difficulty of securing and maintaining certain species, and their shortness of life in close captivity, our zoological gardens can only properly carry out their programme so long as it is possible for them to continually renew their stock of animals.

On the other hand, the museums are all the more responsible for setting before our eyes the various species of animals even long after these have become extinct, and they must do this by means of works of art executed by the hand of man, masterpieces of taxidermy.

And by masterpieces of taxidermy I mean artistic groups of "stuffed" animals that will, as far as may be, show us their life and action, their ways and habits. In former times this work was left to the so-called "animal-stuffer." He took a hide, filled it out with some material or other, and then, so far as he could, gave it the appearance of a quadruped or a bird. Thus one sees a stuffed hippopotamus of this good old time which looks, not like such an animal, but like a gigantic sausage. One sees stags or antelopes that somewhat resemble the wooden toys associated with the Christmas boxes of my childhood, and not the particular species of animals which they are intended to represent—in short, wretched caricatures with neither beauty nor fidelity to nature.

C. G. Schillings, phot.

BLACK-HOOFED ANTELOPE IN THE CARLSRUHE MUSEUM.

C. G. Schillings, phot.

GIRAFFE GAZELLE AND DWARF ANTELOPE IN THE CARLSRUHE MUSEUM.

C. G. Schillings, phot.

HEAD OF AN AFRICAN WART-HOG SHOT BY THE AUTHOR.

C. G. Schillings, phot.

PHOTOGRAPH OF AN OSTRICH'S NEST, JUST AS IT WAS FOUND. THE BIRD'S TRACKS MAY BE SEEN IMPRINTED ON THE SAND. THE DARK SPOTS ON SOME OF THE EGGS ARE PATCHES OF SAND.

Nowadays, however, more than this must be done—the best must be insisted on. Instead of the "stuffer," the artist must come upon the scene. Using the methods of the sculptor, he can artistically fashion a form that will be true to life, and clothe this form with the hide or skin. Happily by these means we now find such works of art exhibited in ever increasing numbers, not only in museums abroad, but also in the public collections of our own country. But as yet this new department of artistic activity is not generally as well understood as it should be. It is still far too little valued.

What labour has to be devoted to the artistically correct setting up of even one single large mammal in a museum—for instance, a giraffe! First the animal must be hunted down in the wilderness, and its hide carefully prepared. Then, if it has been brought home in good condition, there follows a second laborious preparation, and finally the setting up. The difficult building up of the framework, and the work upon the giant beast till all is complete, require the labour of nearly a year. The very first conditions for the success of the whole are great patience, knowledge, and an ideal that is both artistic and true to nature.

Our illustrations show, in its various stages, the progress of the setting up of one of the giraffes I collected in Africa. It is easy to understand that besides artistic and scientific ability for the correct moulding of the form, various complex manipulations are required before the giant beast again stands before us as if "reawakened to life."

I have further tried to show by illustrations of another giraffe, and of a series of antelopes, down to the tiny dwarf

antelope, how under the hand of the artist the animal world can be made to rise up again, as if waked anew to life.

All our larger museums ought to exhibit the most important and most prominent representatives of the animal kingdom modelled in attractive groups in their natural surroundings.

In America it has become the custom for private individuals to place at the disposal of the zoological institutions extensive collections and large sums of money. With this help they are able to produce artistic work, true to nature, works of art, the consideration of which gives the spectator an insight into the life and habits of the animal world of his native land as well as of foreign countries. Unfortunately this custom has hardly yet been introduced amongst us.

My native city of Frankfurt[1] can claim the honour of possessing, in the time-honoured Senckenberg Institute (now transferred to a new home), a museum founded by private effort and private interests, where one may see collections formed for exhibition, that may be pointed out as models of their kind.

The collector of such things can partake of no greater pleasure than he experiences when, making a tour of the museums of various places at home, he sees awakened to new life the wild creatures he formerly observed and laid low in far-off lands. So I could not deny myself the pleasure of adding to this book a number of pictures of animals and groups of animals which I secured in the

[1] During the last few years handsome groups have also been set up in the museums of other places, such as Munich, Stuttgart, and Carlsruhe.

C. G. Schillings, phot.

DRYING ORNITHOLOGICAL SPECIMENS FOR MY COLLECTION.

C. G. Schillings, phot.

GROUP MAINLY COMPOSED OF THE AUTHOR'S TROPHIES IN THE CARLSRUHE MUSEUM. IN FRONT, BELOW, FROM LEFT TO RIGHT, WATERBUCK, GRANT'S GAZELLE, BOEHM'S ZEBRA, YOUNG ELAND; AND ON THE RIGHT A YOUNG OKAPI (*OCAPIA JOHNSTONI*) FROM THE CONGO STATE, THE GIFT OF THE KING OF THE BELGIANS.

wastes of Africa, and which are now set up in various

C. G. Schillings, phot.

WOMEN OF THE RAHE OASIS IN A BANANA GROVE.

museums. These are trophies that must allure every sportsman. It is of course not so easy a matter to secure

them as it is to hack off without any trouble the antlers or horns of some wild animal that one has shot.

Paintings, true to life, from the hands of artists, photographs taken directly from life, and finally these groups *awakened, as it were, to a new life*, are the means that can, and should, exert an educating and informing influence, so that all the beauty of this department of created nature may not be accessible only to a few learned men, but be open to all in general. If to an ever increasing degree this object finds support in influential circles, we shall thus obtain what must be somehow obtained. In the presence of the progress of industry and civilisation no one can indeed permanently prevent by protective measures the disappearance of certain species, even though we may hope to still delay the process of extinction by suitable regulations. But on this ground the duty that I have already indicated becomes more clearly imperative upon us. Its fulfilment cannot fail to be rewarded, in the case of all who take part in it, by the only true satisfaction that is given to mortals, the feeling of having done all that was in any way in our power to do.

EGYPTIAN GEESE IN A SWAMP.

V

Sport and Nature in Germany

NOT by far-away Lake Nakuro alone has "the Spell of the Elelescho" lived. It has lived, and still lives, all over the world; only that it goes by other names, and is linked with other symbols.

In the brief summer of the Polar regions, battling with the snow and ice and the long Arctic night, it lives in the few stunted willows and the scanty reindeer-moss. It can only be fully understood where the ungainly walrus, the mighty Polar bear, coloured like his own snowfields, and the herds of fur-adorned musk oxen and reindeer give life to the wilderness, and millions of sea-birds cover the cliffs, or wheel shrieking through the air. To all these creatures the appearance of man in these wide regions is so strange and unaccustomed that they show no fear of him, and even come hurrying up from all sides to look curiously at this strange new being.

In the high mountain regions of Central Asia, too, this spell survives, associated with the flocks of those timid creatures the primitive wild sheep, with the graceful wild goats, with the stately ibex,[1] and with the life and movement of the countless huge bears of the mountains, and with a strange flora that I myself have never looked upon, but of whose existence I am as persuaded as of that of the spell itself.

It is to be found in the jungles of India, whence the tolerant natives have never driven it out. They have not expelled the animal world from its paradise. There in the region of the lotus-flower the spell may perhaps be recognised on still, moonlit nights.

It survives everywhere: in the Australian bush, in the New and the Old World, on all islands, in all rivers and waters, in the life and movement of the waves and depths of the ocean, so full of secrets everywhere; in a word, where man has not yet driven it away.

Once it lived everywhere in Germany, and even to-day it is still to be found in many places. It has its being where the mighty elk made its home on moor and marsh-land, and our forefathers hunted the aurochs and the bison in the primitive forest. To-day it is associated with the edelweiss and the chamois in the Alps; it has its being in the oak and beech woods, and where the green current of the Rhine flows down, or where the stag sends afar his

[1] The ibex, which was once also common in Germany, has been found by Dr. G. Merzbacher in the central Tian-Shan region in the form of *Ibex sibirica merzbacheri*; and two years ago by G. Leisewitz in such great numbers that the appearance of flocks of hundreds of them was a daily experience.

cry of challenge to his rival, and the huntsman makes his way over the moor.

There one still experiences the spell of the Elelescho. But everywhere, all over the world, everywhere in our Fatherland, it once lived and held sway.

We may hope that the intimate and beautiful relations that the German sportsman establishes between himself and nature in his Fatherland will for a long, long time be handed down from generation to generation, and thus result in the maintenance and preservation of the noble old spell of the woodland and the wilderness. The ideal of *true German sportsmanship* has been developed in as high and full a sense as that of *fair play in sport* in England.

Both of these ideals will be judged in unfriendly fashion only by those who regard them from a distorted point of view. The English ideal of sport is winning the world to itself; the German ideal must do the same.

Coming from a good German school of sport, I consider myself fortunate in having learned to know the wonderful animal world of Africa. There is no doubt whatever that I must ascribe to the influence of this school the fact that my accounts of what I had experienced and seen met with such an appreciative reception both at home and abroad.

How wonderful is the chase in Germany! The primitive attraction for the chase must be a part of every man. One need only once have seen the excitement that seizes upon a gathering of thousands if on a sudden a hare or some other wild creature comes into sight. At such a moment, almost without exception, every one of them is on the move, without the least reflection, and even

notwithstanding the consciousness that in no case can he himself secure the prize. It is the call of a strong impulse deep rooted in men. But in our Fatherland how grandly and nobly what we mean by "true sportsmanship" has developed out of this primitive instinct!

A certain kind of organisation of the business of the chase must have been in existence even in primeval times. Those who have made a study of this department of the life of nomadic hunters in many lands tell us that tribes and groups of families hunt only in well-defined areas, and as they value their lives do not venture to pass these boundaries. I have learned the same thing by my own personal experience of the Wandorobo and other nomad huntsmen of the African plateau. It must therefore have been the case everywhere, from the times when primitive men, the cave-dwellers, began their struggle with the mighty beasts of primeval days, down to our own times, when the chase is more and more regulated till at last it becomes the exclusive property of the owner of the land.

As a consequence of this right came measures for game preservation both against the interference of the stranger sportsman, and as regards the wild creatures themselves. Increasing knowledge taught the hunter that he could not kill more than a certain number of wild animals without extirpating them entirely in his district.[1] Hence grew up our complex game-laws of to-day, and the general feeling

[1] The Hudson Bay Company put on the market in the year 1891 1,358 skins of the musk ox (*Ovibos moschatus*), but only 271 in the year 1901. In the year 1878 the same company sold 102,715 skins of the Canadian beaver, but only 44,200 in the year 1892. A striking example of the results of excessive exploitation of hunting grounds!

that our hunting grounds should be used in as intelligent a way as possible. In Germany this problem has been solved to a remarkable extent. German sport has an important influence on the welfare of the people. Great numbers of our people are strengthened in body and mind by the chase, and, thanks to it, considerable sums of money are added to the resources of the country folk.

According to a moderate estimate there are now in Germany upwards of half a million sportsmen. Each year they kill about 40,000 head of red and fallow deer, about 200,000 roebuck, 4,000,000 hares, 4,000,000 partridges, and 400,000 wild ducks, in all some 25,000,000 kilograms (over 50,000,000 lb.) of wild game, of a value of 25,000,000 marks (£1,250,000), and forming nearly one per cent. of the total meat supply of Germany. The game leases bring in about 40,000,000 marks annually (£2,000,000).[1] But these very sportsmen, who every year kill such a large quantity of wild animals, must at the same time be protectors and guardians of this same animal life! Strange as it may seem, many species of wild animals would have been long ago extinct if there were no sportsmen. For imperative reasons, the hunter must at the same time undertake the part of protector.

[1] Besides other sources, I take these data from an interesting article by C. Brock, in the periodical *Die Jagd*. This writer estimates the area devoted to the chase in the German Empire at 54,000,000 hectares; the number of shots fired in a year at game at 16,000,000, besides some 6,000,000 shots fired at animals that are not game. He rightly notes that for the individual the whole business of sport is a losing or non-productive occupation, but one of productive value for the households of the country folk, as about 130,000,000 marks are annually spent upon it.

But this idea ought to include a great deal more than is now the case. As I have already said, no nation has known so well how to form a beautiful and poetical ideal of the chase and the spirit of sport as the Germans have done. But it is not to be denied that this perfect development, even in its very completeness, has in a certain sense become one-sided, in so far as sportsmen restrict their protection and guardianship to certain species of animals; one-sided, too, inasmuch as to a certain extent they regard their mission from the point of view of a close corporation. In this there is a certain advantage, but also a certain amount of danger now that, as a result of the rapid progress of civilisation, changes are introduced in every department of life so much more quickly than in earlier times.

Huntsmen and fishermen desire the complete extermination of all kinds of animals that they consider to be a cause of injury to their sport. The result is the destruction of many kinds of animals that are beautiful in form and constitute an ornament of the landscape. By the same kind of reasoning sportsmen, in their capacity of landlords and forest owners, ought to demand the extermination of the wild animals that obtain their food from field and forest. Naturally sportsmen do not want this, but they should, as far as may be, let themselves be guided by higher points of view. This is the case already in many instances. For example, as an instance of zealous game supervision inspired by scientific principles, we have lately had to welcome a valuable idea of Forest Commissioner Count Bernstorff. According to his plan, small labels that will not annoy the animals (the so-called "Game marks")

are attached near the ears of young roebucks and red deer. Thus their resting-places, their movements, their growth, can be carefully observed. . . . We are, therefore, actually living in a time when to a certain extent each individual head of game is numbered!

Interesting and valuable as such measures may be, should we not extend our loving care also to the animals that, though they are not reckoned as game, yet adorn and give animation to the land we live in? Some great landlords have given a bright example of progress in this direction. Thus in Hungary there are sporting estates on which wolf and bear are not completely exterminated, and in Germany estates on which the fox is spared to a certain extent. The result has been to the advantage of stags' antlers and bucks' horns on the estates in question. English landlords allow a free home to a pair of peregrine falcons or eagles, so as not to allow these beautiful birds to be completely extirpated.

From these examples it is clear that there can be various opinions as to the view generally taken with regard to "predatory animals." If there is not merely a selfish protection for game animals, but also protection for the other mammals and birds, we shall thus preserve from extinction some of the glorious forms of the realm of nature, and prevent their being sacrificed to narrow interests. There is food for thought in the fact that (as I have often had occasion to observe in Africa) in primitive countries there is to be found an astounding abundance of animal life. *Since prehistoric times man has been engaged in hunting with his simple weapons without, on*

the whole, very much diminishing the number of animals. A striking proof that the destruction of wild life is the work of the Europeans themselves, and of the native hunters carrying firearms under their authority, is afforded by the fate of the North American buffalo, the whales, walruses, and seals of the frozen seas, and finally by that of the elephant in certain districts and of the South African fauna taken as a whole.

We should not therefore act so rigorously in the proscription of our so-called "predatory" animals. Yet, for instance, my near neighbour, Freiherr H. Geyer von Schweppenberg, has lately shown that our pretty water-hen (*Gallinula chloropus*, L.) can do a great deal of damage to grass and corn.

In South Africa what are called "poisoning clubs" have been organised, which aim at the extermination of "noxious animals" by poison. The use of poison ought to be entirely forbidden by legal enactments, with the exception, perhaps, of its administration for scientific purposes. The strychnine canister—the use of which ought only to be allowed, and that in exceptional cases, to those who are making scientific collections—is now making its appearance everywhere all over the world. I have had news from the most distant countries of its employment, unhappily with far too great success.[1] It is already some time since the last *Lammergeier* of the German hill districts fell a victim to it. It is thinning to a frightful extent the numbers of the bears in Eastern

[1] Professor Haberer lately found strychnine in use in various ways in many places in Eastern Asia.

Asia and other countries, though these are quite harmless to man. But in our Fatherland a completely organised "poison business" has grown up, which is a very serious matter.

I should like also to advocate strongly the legal prohibition of the use of pole-traps, to which all our owls and birds of prey fall victims.

If we go on as we are going, the time cannot be far distant when we shall have to strike out of the list of the living several interesting members of our native fauna. In North America, in recent times, the following species, amongst others, have some of them become extinct, others extremely scarce: the Californian grizzly bear (*Ursus horribilis californicus*), the San Joaquin Valley elk, or wapiti (*Cervus nannodes*), Stone's reindeer (*Rangifer stonei*), the prongbuck or pronghorn (*Antilocapra americana*), the Pallas cormorant (*Phalacrocorax perspillicatus*), the Labrador duck (*Camptolaimus labradorius*), the ivory woodpecker (*Campephilus principalis*), the scotar (*Aix sponsa*), several other species of birds, and finally the American woodcock. This last falls a victim chiefly to professional hunters, who are accustomed to kill it by hundreds in its winter quarters.

"This list could perhaps be extended," Mr. R. Rathbun, the Secretary of the Smithsonian Institute (whose kindness I have to thank for this information), adds at the end of his letter.

His communications have also been of special interest to me because they awoke in me old recollections. In the 'forties of the past century my father received a letter

from North America in which he was informed that on ground over which the New York of to-day extends, one could shoot in a single day hundreds of woodcock. I myself, in my young days, used to take care of a beautifully coloured parrot, of a kind that since then has been almost extirpated, and is hardly to be obtained any longer. *Connurus carolinensis* is the name of this beautiful species of parrot, which also appears on the list of extinct animals of North America. There, too, men have begun to give strong practical expression to the movement for animal protection. In sanctuaries like Yellowstone Park there is complete protection for all animal life, including beasts of prey, and the bears have become so tame that they allow visitors to come within a few paces of them. Count E. Bernstorff, who received permission to shoot one of the few bisons still preserved in the State of Wyoming, says: "One might take the way in which the animal life of America is protected as an example in securing still better preservation for the survivors of the primeval wild life of Africa. One must acknowledge that the Americans and their noble President, a brave sportsman, are now doing all that is possible in this matter."

President Roosevelt, in fact, has come forward manfully in the lists as a champion of widely extended protection for all the beauties of nature, and especially of the animal world. He endeavours by his words and writings to work effectually for these great and noble ideas, which bring to all men delight, profit, and contentment.[1]

[1] See, amongst other writings of his, *Outdoor Pastimes*, by Theodore Roosevelt.

Brought up in the school of German sportsmanship, I had later on to change completely my view as to our distinction between "noxious animals" and "beasts of prey." The African wilderness swarms with *beasts of prey*, and yet also swarms with *useful wild animals*. The waters of Africa teem with the *fish destroyers*, and also teem with *fish*. We should not therefore act so short-sightedly and pedantically. We should not be so eager to hunt down the last fox, the last pine-marten. The nesting-places of herons and cormorants are becoming ever fewer; the places where the handsome black tree storks build in our German Fatherland can almost be counted on the fingers of one hand; and the same is nearly true of the nesting-places of our rarer birds of prey.

The killing of a wild cat has already become an event; it is the same with the eagle-owl.

Out of the mass of literature of recent date bearing on the subject, I take a single book. In a very readable essay, *Der Uhu in Böhmen*, Kurt Loos shows that only a few years ago this interesting and beautiful large owl (*Bubo maximus*) was to be found making its home to the extent of some fifty pairs in thirty-five districts of Bohemia; now only eighteen pairs are living there, in ten districts. The author demands protection for the surviving pairs of owls, as natural objects that should be preserved, and he makes out a strong case for his proposal. Röntgen-ray photographs are among the illustrations of this interesting work, and they suggest that in times when one can do one's work with such excellent appliances, there is all the more reason for avoiding the thoughtless

neglect of legacies left to us by Nature from the days of its primeval beauty.

Numerous other examples of the rapid disappearance of certain species in our Fatherland might be quoted here. Unfortunately we have, on the whole, very little right to reproach the people of Southern Europe on the subject of their custom of carrying on a systematic massacre of birds; for we ourselves are always trapping thrushes and larks, and there is the shooting of the woodcock in spring. There can be no doubt that, if we would give up this spring shooting of the woodcock, this bird, which has so won the heart of the German sportsman, would breed abundantly in our forests. On sporting estates in the wooded hills in Baden I have had occasion to observe this bird nesting; and it is to be regretted that German sportsmen, who in other matters obey the customs of the chase with such scrupulous conscientiousness, do not spare this bird in the spring-time, although they are thus extirpating from their hunting grounds a bird that breeds in the woodlands of our country. The North American woodcock is in process of extinction, for it also is not spared by sportsmen in its breeding grounds, and it is just as little in safety from them in its winter quarters. It is thus one of the disappearing birds of North America, whilst our European woodcock is not so much exposed to harm from systematic pursuit either in its partly inaccessible northern breeding grounds or in its winter abode. But it is indeed difficult to abolish old, deep-rooted practices that are no longer abreast of the times. "Che vuole, signore?—il piacere della caccia!" was the

reply of an Italian to a tourist who remonstrated with him on the subject of the extraordinarily widespread destruction of doves by means of nets in Northern Italy. The same answer would probably be given by the monks[1] of certain islands of the Mediterranean, who, keeping up an old custom, kill countless multitudes of turtle-doves during their migration. These are their favourite dainties, and they also export them largely in a preserved state. So, too, it will be a difficult matter to obtain from German sportsmen the complete abandonment of their pleasant spring campaign against the woodcock. Through the very interesting experiments of the Duke of Northumberland, who had marks put upon numbers of young woodcock, it has been ascertained that large numbers of them undoubtedly spend the whole winter in England. Now, if Professor Boettger and Wilhelm Schuster are right in their conclusions, drawn from similar observations, as to the return of the conditions of the Tertiary period, and if the species of birds they observed used at an earlier date not infrequently to winter with us, a more extended protection for the woodcock ought, at any rate, to be introduced.

The continual levying of contributions on our colonies

[1] On the destruction of the turtle-dove (*Turtur turtur*, L.) during its migration to Greece, see Otmar Reiser, Curator of the National Museum of Bosnia and Herzegovina, *Materialen zu einer Ornis Balcanica*. At Syra one sportsman shoots as many as a hundred in a day; at Paxos, according to the Grand Duke Ludwig Salvator, they are killed in heaps. The lands of the Strophades Islands are completely equipped with huge falling snares and shooting-stands for the systematic massacre of the "Trigones." Everywhere in Greece when the cry of "Trigones!" is heard, fire is opened upon the newcomers.

of sea-gulls, to the injury of a great number of the other species of birds that inhabit our sea-coasts, should also be greatly restricted. If this is not done we shall witness, within a period already in sight, a lamentable extermination of our shore- and sea-birds. And how grateful for protection many species show themselves! Wherever it is extended to them they enliven the landscape in the most pleasing way. So, too, it has been found that certain species of gulls have adapted themselves to a kind of nocturnal life in the neighbourhood of our great commercial ports.

I may here mention as standing in special need of protection, and as wonderful adornments of our German landscape, whose preservation should find an advocate in every thoughtful man—the buzzard, the kestrel, the hobby-hawk, both our varieties of kite, the crane, the heron, the white and the black stork, the crested grebe, the water-hen, and the coot. All these enliven and embellish the landscape to a conspicuous extent, and should not be sacrificed to selfish interests.

I knew an old gamekeeper, a native of the March of Brandenburg, who throughout the course of a long life had been taking care of a shooting estate, which had grown up with him, so to speak. He protected *his* wild creatures, and was delighted at having a colony of storks' nests and a group of badger burrows in *his* woods. For long years he was able to preserve a primeval oak, the largest in the whole district, which in the year 1870 he named the "King's Oak."

To-day no birds of prey breed any longer on this

estate; the primeval village of badgers is in ruins, and irreverent hands have cut down the "King's Oak." But the old man, now that his time of service has expired, never sets foot on the estate, though he is passing the evening of his life in the neighbourhood.

That was a man who had innate in him a just and reverent feeling for the preservation of the beauties and glories handed down to us from the far past, and who loved, and, so far as it was possible, guarded these wonders of nature.

Let us once for all throw overboard the sharp distinction between "noxious" and "useful" animals, and within certain limits let us protect the whole world of animal and plant life. This would be the noblest form of game preservation, in the widest sense of the word.

I venture to dwell upon these ideas here, knowing that they are shared by a large number of men and women. Amongst our German game-preserving associations we have societies that have rendered great services to the protection of our native wild animals. An extension of these useful efforts to the protection of all our native fauna and flora in general is most certainly called for by the greatly altered conditions of our time. We are gradually coming to a period when every individual wild animal will be registered by specialists and indicated in a list! And we are also gradually approaching in our sporting estates the ideal of extensive, well-kept gardens, in which no touch of wild nature will any longer be left.

I appeal once more to the authority of President Roosevelt. He expresses the opinion that it is now not so much the question of preserving great supplies of any one species as of maintaining the primitive beauty of the forest in its wild life.

I think with pleasure of my youth, when, at a time when my father, in union with other game-preservers, founded the *Jagdschutzverein* ("Association for the Protection of Game") of the Rhine Province, I had the opportunity of making myself acquainted with the old state of things in this department. My native district, the Eifel, still sheltered boars, eagle-owls, wild cats, and many other rare animals living in wild freedom. The ear of the boy learned to know and to love every cry of our native fauna. Roosevelt rightly remarks that many of the cries of American animals, such as the hoot of the owl, are *falsely* described as unpleasant. He who knows them well comes to love them, and would not like to miss them from the general concert of animal sounds. Here in Germany, too, we have evidence of this to a gradually increasing extent.

The German sportsman ought to give a shining example to those of other lands in this matter of the protection of *all* the dwellers in his hunting grounds. To his care is entrusted *the whole German fauna* in its widest extent. To secure the preservation of this splendid work of nature here in Germany is an enterprise that will earn the gratitude of every lover of nature, the thanks of millions of men. The German sportsman, as the chosen guardian and keeper of the wild life of his

native land, must also become the protecting lord of all its animal and plant life; he should maintain his own estate in its primitive condition to the fullest possible extent. But to his estate, in a wider sense, also belongs the velt of German Africa, still so rich in wild life. Here, too, the German sportsman should take up the position of guardian and protector.

The well-known English writer Clive Philips-Wolley says that happily the old English sporting spirit is not dead; that the farthest and wildest hunting grounds of the world, a visit to which demands the greatest energy and courage, are still sought out by men of the English race, as in earlier days. England owes a great part of her colonies to men, eager for enterprise, who as hunters penetrated into unknown wildernesses; and the English hunter has, thanks to his courage and determination, always played a great part among strange peoples. The reckless conduct of travellers in far-off countries and among strange tribes is often sufficient to give a *whole nation* a bad character in the eyes of these people, while a right bearing may make it appear worthy of their admiration. Philips-Wolley further points out that the taking of "big bags" of game in far-off hunting grounds [1] should not be considered merely from the point of view of stay-at-home people, but from the point of view of those who have special knowledge of the districts in question.

The time has passed when far-off lands were secured

[1] Expeditions in uninhabited districts have sometimes been entirely supplied by shooting wild animals.

in this way. But I would wish for the German sportsman that he may, so far as is possible, visit the splendid hunting grounds that he can now find in the German colonies, and there become familiar with the chase in forms that our homeland can no longer offer to him. The more brethren of the green-coated guild go abroad nowadays, and bring us tidings of the fauna and of the hunting grounds of the German colonies, the more will our knowledge of this difficult subject be enlarged, and we shall be in a better position for working out practical protective regulations for the preservation of these splendid hunting grounds.

And what a deep charm for the hunter there is in pursuing the chase in such regions! It is true that circumstances have so greatly changed in a few decades of years that the old hunters—say those of fifty years ago—would probably not be able to take the same deep delight in the sport of to-day that they felt in their own time. It was quite a different matter to go out to meet the dangerous wild beasts of Africa with the simple weapons, the muzzle-loaders, of that time. True, the African hunters, whom Professor Fritsch made acquaintance with in Cape Colony about the time of the 'sixties, already possessed long-range weapons. They used "small-bore rifles" firing an elongated bullet that carried up to 1,500 yards. These rifles were fitted with ivory sights and silver sighting-lines, for shooting at night. A hunter named Layard was at that time famous in Cape Colony for having brought down an ostrich at 1,750 yards!

Let us follow for once the wanderings of a hunter in East Africa, and give ourselves up completely to the charm of such a sporting expedition. No one is better fitted for making himself acquainted with lands that are remote, difficult of access and unhealthy, than the sportsman, who, even in such tracts of country, can find enjoyment. Besides the greater or less delight that the chase itself affords, much besides that is beautiful and desirable will present itself to him.

When he has got his caravan together he enjoys in the first place the feeling of primitive untrammelled life in the wilderness. We see, indeed, how amongst those who belong to the most highly developed of civilised nations, even in our own days, the need of some dim reflection of this life makes itself plainly felt. Thus, especially in America, we see how many dwellers in cities spend some days out in the woods and prairies, in order to enjoy there for some time under the tent the pleasures of camp-life.

In a land which, like Africa, harbours all kinds of dangers, we must leave all hesitation behind us. In fact, the charm of danger must be an attraction to the huntsman. He has to justify the confidence of his followers and of his comrades. The natives who come in contact with him will by his bearing and conduct form their judgment of all his compatriots, and of his native land as a whole. So there imposes itself on him the duty of regarding himself as *a representative of his nation.* Though he is justified, if it comes to that, in defending his life even by bloodshed, he will nevertheless seek, as far as

is possible, to enter into friendly relations with the native tribes. In many districts of Africa the European will traverse, with altogether superior weapons in his hands, countries whose inhabitants still fight with nearly the same weapons that were borne by prehistoric tribes. But notwithstanding this, he must remember that his superiority rests chiefly on the prestige that the European possesses in presence of the black man. But this prestige will not suffice, especially at night, to keep off all attacks. It is therefore necessary that proper precaution should be the rule. This is in the long run not such an easy matter, for generally in the midst of apparent peace no one will think of the possibility of an attack. But it often takes place without warning; and thefts at night will also sometimes happen. In short, the middle course between necessary precaution and needless nervousness is not always easy for the traveller to hit upon.

But all this, to a great extent, adds to the charm of that wild caravan life. There is something endlessly alluring in thus going out into the open country with all one's belongings, pitching one's camp by some pleasant place where there is water, and under shady trees, and wandering, free as the birds, wheresoever the desire or wish of the moment leads one. Of course, if no shady trees are to be found, if the water tastes strongly of natron, or looks more like pea-soup than clear spring-water, if swarms of mosquitoes annoy one in the night, and flies and other insects in the daytime, all this must be put up with as a part of this wild life. Free as the birds, we can indeed choose our way, but with the everlasting

restriction that it lies where water is to be found, and that we can secure supplies.

But with a little good-humour one can get over all this, especially if one keeps before one's eyes the fact that there are many worse things here, such as malaria, dysentery, and all the other numerous tropical diseases with which these lands are so lavishly supplied. But we could not find greater enjoyment in the primitive beauty and charm of this wilderness, even if all this were not so.

It is true that the hunter in Equatorial Africa cannot obtain such splendid trophies as the stag's antlers, that marvellous structure built up by an animal organism, and, according to Röhrig's striking researches, renewed again year after year in about eighteen weeks. But instead there beckon to him other prizes—the mighty horns of the buffalo, the heavily knotted horns of the eland, the strong spiral horns of the two species of kudus, the variously shaped horns of the cow-antelopes, the sword-like horns of the oryx-antelope, all the beautiful variously shaped antelope and gazelle horns, and many others that make most delightful trophies, and will be still more highly valued the more sportsmen go to these distant countries, and the more these treasures, often so difficult to obtain, are understood. The mighty weapons of the elephant, that glitter white in the sun, the uncouth horns from the head of the rhinoceros or the tusks of the hippopotamus, the head of a giant crocodile bristling with teeth, the plain and yet so eagerly coveted hide of the King of the Desert, and the glaringly

variegated skin of the leopard—all these are souvenirs and trophies that have the greatest charm for the hunter ; of the greatest charm and value if he himself has taken them, and not merely (to use the sharp words with which Roosevelt scourges such practices) contracted for their capture. The German sportsman must contend for all these trophies against certain unsportsmanlike elements, such as the Boers, who unfortunately seem to be now exterminating the wild animals on Kilimanjaro ; but they belong to the sportsman much more than to such as these. German hunters should not hesitate to take by sportsmanlike methods their fair share of the stock of big game, and in this way, as has long been the case in India and Ceylon, a code of customs of the chase will grow up in the German colonies, suited to the special circumstances of the country. In a publication by Captain Schlobach, that is well worth reading, it was recently stated that the military posts at Olgoss and Sonjo on the Masai uplands were continually at starvation point, and, in default of other supplies, had often recently been provisioned entirely with the spoils of the chase.[1] What would not German sportsmen (who contribute such large sums to the colonies) have given to be able to shoot these wild animals, and at the same time to help to spread in our colonies the ideals of the chase as understood in Germany, and to assist in the general recognition and success of German sportsmanship !

Our knowledge of the animal world of foreign lands

[1] Cf. Schlobach, *Deutsch-Ostafrikan.* Zeitg. 1 Beiblatt, 10 Februar, 1906

C. G. Schillings, phot.

THE NYÍKA: A BIRD'S-EYE VIEW.

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is gradually increasing to such a satisfactory extent that not only do we find a general interest taken in the wild life and the hunting grounds of our colonies, but we shall also be in a position to introduce adequate measures of protection for this beautiful fauna.

In our colonies much has been lately done towards clearing up the hitherto hidden secrets of animal life. But if one remembers how many different opinions there are, even amongst authorities at home in Germany, with regard to many of the questions relating to our home fauna, one will pass a more lenient judgment on the many sharp controversies about matters of this kind in the tropics.

But nothing of value is to be hoped for from controversial strife over divergent theories. All men who have acquired expert knowledge on these difficult matters should rather unite in a common task, and strive by co-operation to obtain some adequate result.

In the wide British colonial possessions in Africa very extensive reservations have been established, in which no one is allowed to harm the animals. The practice of making exceptions in favour of certain officials has not been found to answer, and has been given up. So now wide districts of British Africa rank as animal sanctuaries.

In German Africa, too, the authorities have tried, as far as they can, to obtain useful results by similar methods. Unfortunately serious events of many kinds are daily contributing to the diminution in numbers of the fauna of German Africa. Thus the war in South-West Africa is sweeping away the still surviving stock of wild animals as with an iron broom.

In the face of all this, all parties concerned should take their share in common action. Our museums should be provided with the necessary material. Even if our knowledge of the African fauna has made sufficient progress, it further concerns us to exert an educating and informing influence on every pioneer of our colonies, so that he may not come in contact with that beautiful animal world in utter ignorance of it. Unfortunately we are still greatly wanting in this respect. However, in recent years a great amount of material has been placed at the disposal of the museums by our colonial officers, officials, and private individuals. Many of them have even made important contributions to our special knowledge of the animal world.

But now, whether it is a question of tracing out the hidden and unknown life and ways of that equatorial animal world that has come into our possession, or of investigating the customs and languages of races that are barely discovered, or of tracking the horrors of tropical diseases and the germs that excite them and becoming master of that miniature world of life with the lens and the microscope, or of going into the wilderness as a sportsman —the men who devote themselves to all these pursuits will be led onwards by that spell, whose name the reader guesses, the spell of unchanged primeval conditions and untouched nature!

May as many as possible of our German sportsmen go forth into our tropical possessions and yield themselves up to this spell! That which in our hunting grounds at home speaks to their hearts in the rustling of the oak and beech

woods and on familiar moors and fields, they will find in a far higher degree in that far-off wilderness under the German flag. Returning home, may they, working in unison, and by mutually supplying what each may lack, bring into existence some splendid memorial of the joys of German sport.

ORYX ANTELOPES TAKING TO FLIGHT.

VI

The Lonely Wonder-world of the Nyíka

THE endless wilderness of the Nyíka presents to the traveller so much that is strange, beautiful, and wonderful that at times his senses become wearied of these changing impressions of travel, and a longing comes over him for the familiar scenes he has learned to love at home.

As though in giant characters written on its rocks, the Nyíka tells us of the conditions and the life of the past and at the same time of everyday actualities, giving us its message as well by its snow-covered volcanic peaks as in the footprints and tracks of the mighty creatures that wander through it. It is a difficult undertaking to reconstruct in fancy all the splendours that must once have presented themselves to the eye in this region. But nevertheless I will tell of what I have looked upon in the past,—of the many beautiful sights that linger in my

memory and rise up like the shadows of a mirage,—of

A VELT HILLOCK. THE SOLITARY TREE WAS FULL OF NESTS OF WEAVER-BIRDS.

the delightful manifestations of its moving life, coming and going on hill and in valley, as strange, wondrous, and

unfamiliar forms reveal themselves to the astonished spectator.

The mystery of a deep harmonious influence belongs to the mighty wilderness. It reveals itself in its full beauty to him who has strenuously acquired a love for it by making a long sojourn in it and paying to it the tribute it demands.

A stony wilderness extends endlessly on all sides, and the sight ranges without limit over the expanse that loses itself in mist and cloud. A barren stony sea, as far as the eye can reach!

But it is not the velt or the African desert that lies below us as we rise one moment a hundred yards above the surface of the earth and the next three hundred yards and more. It is the sea of houses that form the capital of the German Empire. . . . In a few seconds the view takes in all the full extent of the mighty city, and then, as if in a dream, what we have just seen disappears from our sight. Borne by a breeze, of which we are hardly aware, our balloon sweeps towards the Baltic Sea. . . . It is a strange feeling thus to enjoy, thanks to our lofty point of outlook, an extended view far over the level March of Brandenburg with its teeming population all below us, a view which, old as the world is, has been vouchsafed to few mortal men. The city, with all its human life and activity, lies far below us. Its roar and tumult, that strange voice of the stony sea, has died away. We begin to make a long journey only a few hundred feet above the surface of the earth. Later

C. G. Schillings, phot.

THE SUMMIT OF MOUNT 'NGAPTUK, ABOUT 6,000 FEET HIGH. THE CLEARNESS OF THE AIR MAKES IT LOOK AS IF THE ASCENT COULD BE QUICKLY MADE, BUT IT IS A WORK OF SEVERAL HOURS. I CLIMBED IT IN 1899—THE FIRST ASCENT BY A EUROPEAN. IN THE RAVINE RUNNING UP ON THE LEFT I FOUND SEVERAL ELEPHANTS. IN THE DRY SEASON THESE HILLS ARE THE RESORT OF NUMBERS OF RHINOCEROSES.

on we rise, sailing through banks and clouds to a height of nine thousand feet above the earth, but before this higher ascent we have time and leisure to take a bird's-eye view of "all that creeps and flies." What an outlook over forest and plain! As we fly over them, horses grazing in paddocks, cattle on the pastures, for a moment suggest to me an illusion of the African velt peopled with its wild life. The eye, again and again fascinated by this prospect as a whole, can hardly grasp the details. Now our course is over endless open heaths, over moors and woodlands. The fleet-footed red deer, frightened by the drag-rope, look up in astonishment and stare at the strange monster, not knowing whither to turn in flight from such a menacing apparition. How the strange monster was a few hours later within a hair's breadth of burying us in the waves of the Baltic Sea is another story. . . .

How many hundred times, after I had gone back to the Dark Continent, have I wished for such a lofty observatory, an airship that would bear me over velt and desert, and from which I could fathom all the secrets of the animal world of the tropics, instead of having to travel toilsomely, fettered to the earth, often merely making step after step automatically in the blazing heat of the sun. When one day such a wish as this is fulfilled, that animal world in its beauty and splendour will have to a great extent passed away. . . .

I must, therefore, content myself with lofty observatories of another kind, that are not unfrequently

to be found in the Masai uplands, in the form of numerous hills and rock masses. These afford splendid views and pictures of the animal creation to the spectator who waits patiently on their summits for hours and days, and has the help of good optical instruments. What life and activity displays itself there before our eyes under favourable circumstances! Though the wilderness may appear a desert solitude, bare and empty of all life, let only a few hours go by and the sun change its position a little, and already one sees movement under the trees and bushes that have been till now casting deep shadows. Then with measured steps, prudently regardful of their safety, all kinds of animals come forth to graze. We see the different wild species appearing, at first a few individuals, and soon in greater or smaller herds.

How far the eye carries in this clear transparent atmosphere, and what a wide tract of country we are able to overlook! In this tropical brightness, after weeks and months, and even years, I could not get rid of the perplexing illusion as to distances. The tract of country that my sight could command seemed always much less extensive than it really was. And again, we were continually being misled by shimmering reflections of the air, so that we took gnus for elephants, ostriches for rhinoceroses, zebras for wild asses, and we might even hold to our mistaken view for a considerable time. He who wants to watch the living animals in this way from a lofty point of observation, must be able to keep on persistently for hours. Thus only will the scene piece

C. G. Schillings, phot.

ONE OF MY LOOK-OUT PLACES ON THE PLATEAU BETWEEN KILIMANJARO AND MOUNT MERU.

by piece become familiar to him. Thus only will all the moving life below him very gradually combine into one splendid and intelligible picture.

On the way to my look-out hill I pass thousands of the tracks made by wild animals.

At the very outset, the traveller from northern lands sees a most surprising sight in those hundreds of thousands of tracks made by wild animals, and faithfully preserved for weeks and even for longer periods in the dry season on the plains of Africa. The giants of the animal world leave behind them their mighty footprints, often for nearly a year, holes in which a man will sometimes break his leg. But the footprints of the smaller animals also last a long time on velt and plain. And the language of the wilderness rises to a most effectual appeal to our senses when these tracks are associated with the marked tarry scent of the waterbuck in the bush, the breath of the great wild herds on the plain, the strong scent left by elephant or rhinoceros in the primeval forest and in the sultry thickets, and the scent of the buffalo among the reed-beds.

There is often a chaos of tracks, a wild maze of paths trodden flat as a barn-floor, crossing each other, and then again uniting, so that the idea of tame herds, mentioned before as at times suggested, can no longer hold good.

To-day we have again waited patiently to see the wilderness gradually come to life in the hours of the afternoon. And we have not been disappointed.

Out from the shadows of scattered groups of trees

there march great herds of the white-bearded gnus, that remind one so of small buffaloes. Slowly they make their way to the more open grazing ground and disperse themselves over it. But careful watch is kept by a few of them—the bulls that lead the herds, experienced old fellows! Under their guardianship the herd feels itself perfectly safe. There is also an unusually large drove of the wonderfully graceful impallah or black-tailed antelope. What a remarkable contrast is presented as the herds mingle together! The gnus, strongly built, haughty in their bearing, conscious of their strength against all animal foes, stand out wonderfully amongst their almost too graceful comrades, the impallah-antelopes. We can plainly distinguish that the females and those that are accompanied by young ones keep more together, while the bucks of the impallah-antelopes keep apart and look after their safety.

Now a dark black mass slowly separates itself from a large group of trees. It is followed by several forms that do not so easily catch the eye. Our field-glasses tell us that a small flock of ostriches has come to mix with the wild species already noted. Now there are perhaps well over three hundred head of these three kinds of wild animals united together in one gathering. They are used to come together in the most friendly way, without apparently taking much notice of each other. For a long time the sight of these creatures, all so different, holds us fascinated. But our optical instruments must restlessly explore the distance for new sights of the animal kingdom; and at the same time there are even

C. G. Schillings, phot.

HERD OF BLACK-HOOFED ANTELOPES.

C. G. Schillings, phot.

A HERD OF BLACK-HOOFED ANTELOPES PHOTOGRAPHED AFTER STALKING THEM WITH THE CAMERA FOR HALF AN HOUR.

better instruments of investigation at work—the eyes of my black companions.

"Pharu, bwana!" now whispers one of my men, and points cautiously with his arm down to a certain point on the plain. His caution, however, is not necessary, for it is at a distance of at least a thousand yards that his sharp eyes have distinguished the outlines of two almost invisible rhinoceroses that are moving slowly through a group of acacias. What an effect that word "pharu" has upon me! For once more there has come close to me one of those strange, mighty beings that really belong to a time long passed, and which, like the elephant, the giraffe, the zebra, the gnu, and a few other forms, lend to the wilderness the charm of primeval days. Naturally still stronger is the effect of the cry of "Tembo!" on the hunter and the watcher amid such scenes. "Elephant!" This name electrifies even the weariest traveller. But when the word is "Twigga!" ("Giraffe!")—even here in Europe the strange, slender-necked creature, moving in some acacia wood all flooded with the sunlight, comes up bodily before me—bodily and plainly to be seen, but alas, only in imagination!

After trying for a minute, I succeed in getting the massive creatures sharply defined in the middle of the field of my glass. But the clear view of them is something that comes and goes. Several times it looks as if the velt had swallowed them up; then they suddenly come into sight again, being specially visible to the eye when they show themselves sideways. Seen from front or rear, particularly when at rest, they are all but invisible.

We are in luck; the rhinoceroses are ambling towards us, and come nearer and nearer, slowly following the line of some hollows in the ground.

Now, borne on strong pinions, and brightly illuminated by the sunbeams, one of the great bustards cuts through the sea of air, and sinks down into some low ground far away below us. This is not an unusual sight in the late hours of the afternoon, and soon after we see not only some more of the same species, but also three other bustards of a smaller and commoner species that is more active in flight. It is the *Otis gindiana*, which I have got to like so much on account of its charming gambols on the wing, that must be a pleasure to every lover of birds. At this time of day it carries on this strange tumbling in the air, and if the day is hot and dry it makes for the neighbourhood of the water, or in any case for certain hollow places of the velt that provide it with at least a certain amount of soft vegetable food. Another picture! A great flock of spendidly coloured crested cranes wings its strong undulating flight and goes away over the hill. I notice in the air the striking appearance of the snake-vulture and a pair of the nimble-winged Bateleur eagles, the "sky apes" of the Abyssinians. My gaze follows them eagerly into the distance. . . In what various ways the bird world displays its mastery of the realms of air! Our attention is riveted now on the quiet gliding flight of the vulture in the highest levels of the air, now on the spectacle of a struggle in the air between some birds of prey and some ravens or bee-eaters that are annoying them.

C. G. Schillings, phot.

BLACK-TAILED ANTELOPE BUCK PHOTOGRAPHED IN THE BUSH AT A DISTANCE OF ABOUT EIGHTY YARDS.

C G. Schillings, phot.

A HERD OF ANTELOPES PHOTOGRAPHED IN THE BUSH AT FIFTY YARDS.

Searching the ground as it goes, the augur buzzard (*Buteo augur*) wings its flight over the stone-strewn slopes of the adjacent hill. Bateleur eagles wheel in graceful circles high in air, let themselves fall down for several yards, and then shoot up again heavenward. For hours at a time they will carry on their strong-winged circling and plunging through the realm of air, apparently without effort or fatigue. Various kinds of kites show themselves in their oscillating flight, that makes them always so clever at escaping the gun; amongst them large numbers of Montagu's harrier (*Circus pygargus*, L.), which at certain times of the year range restlessly over the velt. Hawks and sparrow-hawks wing their rapid flight in search of prey. In short, every kind and form of bird flight that one can imagine! For instance, the proud majestic flight of the larger species of vultures is essentially distinct from the heavy flight of the small Egyptian vultures (*Neophron percnopterus*, L.), whose flight the Crown Prince Rudolph of Austria most aptly described, when he remarked that at a distance the bird might easily be mistaken for a stork.

It is indeed a great pleasure to follow with the eye all the wondrously beautiful types of flight that the African birds of prey present to us. The *enormous numbers of birds of prey*, in a land that is nevertheless so rich in wild life, ought to suggest some salutary reflections to those who, here at home, with such dogged persistence wage war with guns and pole-traps against those creatures, which are so great an ornament to the landscape. For my part, I would on every point support

the proposals of experienced men, like Freiherr von Besserer of Munich and Dr. von Bocksberger of Marburg, who advocate protection even for our birds of prey, at least within the Government domains. "Let us try," says Von Besserer, "still to preserve them at least within certain limits. Let us grant them some few places of refuge. Let us not arraign them too strictly for every theft, so that future generations may also enjoy the spectacle of their beautiful flight."

And now it seems, as if on some gigantic chess board, move after move is being made on the plain below us. We have hardly remarked the wild species already noted, when we suddenly find ourselves perplexed as to which point we shall first direct our gaze to, which is to attract the special attention of our eyes. To our right, two great herds of zebras come rolling along, and ever as they move are now plainly visible, now almost disappear, as if in regular alternation. To our left, on the crest of a ridge that rises there, suddenly sharply defined silhouettes appear—again it is a herd of gnus, and this time clearly one that numbers at least a hundred and fifty head. While our attention is still attracted by this beautiful spectacle, my trusty comrade Abdallah suddenly lays his hand upon my arm and, only with a glance of his eyes, indicates the little valley that lies stretched out below our feet. This time there is good excuse for his caution. For there, looking as if they were cast in bronze, two of the wonderfully beautiful giraffe-gazelles stand staring up in astonishment at the place where we are posted. It may well be that these timid children of the wilderness here had never

yet been disturbed by the strange sight of a human figure. "Nyógga-nyógga!" whispered the lips of my comrade.

It is not often that one has the chance of seeing the nyógga-nyógga at such close quarters, and besides, it is extremely difficult to watch it without being noticed by it. It is so completely lost to sight in its surroundings, and is so extremely timid and watchful, that I have very seldom indeed succeeded in observing this splendid animal before it has itself remarked my presence. When I succeeded it was almost invariably towards evening when it had come out to feed. It is worth while to take full advantage of such moments, for the slightest disturbance instantly drives it away. And so it was now. It was not long before the two nyógga-nyógga, with their long necks stretched out, disappeared in the hollows of the broken ground that extended below the place where we stood. After this I caught sight of them a few times standing amongst the clumps of acacias, timid, surprised, and watchful; then the gazelles betook themselves to the protection of the wide velt, looking like mere points in the distance.

To me it seems as if the sonorous name that the Swahili language gives them, and also the softer name that sounds so sweetly in the mouth of a Masai,—"Nanyād,"—best and most fitly express their beauty, strangeness, and grace.

Again we turn our attention to all that is going on below us. This time it is the rhinoceroses, which have approached to within a few hundred yards of my post, that most engage our attention. We observe how they nibble here and there at the boughs of the *Salvadora persica* and

other shrubs, and then again rub their rough hide or their horns against the strong trunk of a tree or on a block of stone. They have all this time been coming gradually nearer to the herd of gnus that we first noticed, and now at last they stand quietly on the level ground, only a hundred paces away from the old gnu-bulls which are acting as sentinels.

And now it is I myself who am the first to make out with the glass a third rhinoceros. "Wapi, bwana?" my companion eagerly asks me, and as I point out to him the place on the velt where I have picked the animal out, he approvingly confirms my observation with the remark: "Ndio, bwana, pharu mkubwa sana" ("Yes, master, a very big rhinoceros!")

After some time we see that it is an old and unusually large bull; he, too, has gradually taken the same line as his two colleagues. Our observation proves to be correct, and we also remark before long that the first pair of rhinoceroses we had noticed is made up of an old cow and her nearly grown up young one.

More herds of zebras and gnus, and small troops of Grant's gazelles and of impallah-antelopes have come into sight, and now they are joined by a whole crowd of hartebeests, which so far have kept themselves hidden in a side valley of the velt full of thick tall grass.

And now the moving mass of animal life is ever more abundant, more varied. I notice in the valley at the foot of my hill a string of guinea-fowl; how they hurry and scurry about, flutter up with sounding strokes of their wings, and then soon drop down again! And now my

C. G. Schillings, phot.

MASAI HARTEBEESTS (*BUBALIS COKEI* Gth.) (THE "KONGONI" OF THE SWAHILI, "OL-KONDI" OR "OL-LUDJULUDJULA" OF THE MASAI).

C. G. Schillings, phot.

GIRAFFE GAZELLE (*LITHOCRANIUS WALLERI*, Brooke) STANDING IN ITS CHARACTERISTIC ATTITUDE BEFORE TAKING TO FLIGHT.

attention is attracted by a pair of Bateleur eagles, that wheel in the air, and enjoy themselves for an hour at a time playing on the wing. They probably have made their eyrie not far from this spot.

For minutes at a time the cry of the francolin rings out clearly round about my post; then again it is silent. My eyes can indeed see animals of many kinds, and my sight ranges with restless efforts over the far distance; but so far I have looked in vain for a form that is frequent and familiar enough in this wilderness—the towering figure of the "Twigga."

Where can the giraffes be hiding to-day? Why have they not come out to the still freshly green acacias in the far-stretching hollow to my left, where I have already marked their presence for whole days at a time?

And yet they are there, only I had failed to distinguish them. At last I can make out their strange forms, as they graze there among the acacias, and they stand out sharply under the oblique rays of the sun.

What poetry there is in the movements of all the various organisms that our eyes behold! Every variety of gait, from the heavy, swinging, and nevertheless rapid march of the pachyderms to the graceful speed of a pretty gazelle, speaks in a language of its own to him who has become familiar with the peculiar movements of this animal world. Just as at the outset the strange appearance of an animal one sees for the first time makes a surprisingly strong impression on one, so too does the great difference in the gait of the various species. But they were all soon familiar to me. So now at the sight of

the giraffes I feel a pleasure and delight in their quaint coming and going, their heads appearing and disappearing, there below me in the midst of the green bowers of mimosa leaves, high over which my view ranges. What laws must be at work here too, by whose operation I am compelled to feel all this to be so beautiful, so harmonious, so splendid! I grasp the meaning of the words: "Therefore I believe that life will first open its eyes in that world of which Goethe said: 'There is still the life of life, and this is only form.'"[1]

What a splendid sight there is from my lofty look-out! the whole of this mighty spectacle displays itself almost without a sound that I can hear. Only a few voices of birds, but no cry of any other animal reaches my ears. But as the breeze rises more and more towards evening, there begins in my immediate neighbourhood a strange and beautiful concert, that is already familiar to me. And now, as the wind blows more and more strongly through the perforated gall-nuts that hang on every tree above us, there resounds through the desert silence a strange melody, a strange language of musical notes that only the sound of the Æolian harp can to some degree represent.

These nut-galls on the acacias are bored quite through, and in many cases become the dwelling-places of small ants. If one disturbs them by tapping on the outside of their strange habitation,[2] they come swarming out to fight

[1] Houston Stuart Chamberlain, *Immanuel Kant.*

[2] According to the latest observations of Professor Yngwe Sjöstedt these nut-galls are inhabited by three different species of ants.

C. G. Schillings, phot.

GRANT'S GAZELLES (*GAZELLA GRANTI* Brooke).

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with the disturber of their peace! It is not so often that their strange ways and doings concern a human being, but it comes to pass to-day. The watchful observer takes delight not only in the sound of these strange musical instruments, but also in the thought that they give shelter to a little world of their own, a peculiarly organised little state made up of living beings, just as the wide endless wilderness below them is a state with the various larger wild animals for its inhabitants.

My diary records yet another kind of natural observatory, a giant tree uprooted on a wooded river-bank. Here, as it were, in the gallery of the wood, the huge trunk felled by the storm-wind offered me an inviting seat among its branches, and thence I enjoyed many a sight of the animal world around.

There I had a view of the river close at hand, and farther away many clearings of the wood, which at this time of the year showed a rich display of animal life. The ripening forest fruits had attracted into this neighbourhood large packs of baboons. It was good to watch their busy activity as I looked down from my observatory, where I sat hidden by a thick growth of creeper. Great herds of antelopes, and especially waterbuck and Grant's gazelles, are regularly to be found in these wide clearings of the woods. I remember some hours of the afternoon when the life of the forest displayed itself here in a way that suggested Paradise. I saw at the same time a large drove of the graceful, wonderful pallahs, and, grazing in their immediate neighbourhood, some twenty Grant's gazelle bucks which had joined together to form a great

herd. The antelopes had scattered themselves over part of the clearing, feeding on the fresh growing grass there, but all the while keeping themselves somewhat apart from the herd of gazelles. But they had gradually drawn near to a party of waterbuck which were standing under an old shady tree, and now I had an opportunity of watching for a long time these three varieties of antelope, all so beautiful, yet so different. To my surprise, after some time they were joined by nine stately eland-antelopes, whose white side-stripes made them wonderfully prominent among the uniformly coloured coats of the waterbuck. Amongst these animals some three hundred baboons were moving about with a certain careless self-possession. They were all big ones, keenly devoted to the hunt for insects, pulling up grass and turning over stones. Some of the older individuals meanwhile scrambled up tree trunks for a few feet, and thence kept a careful look-out for the approach of any possible enemy.

I kept as still as a mouse, knowing well that the slightest movement would betray my presence to the timid, keen-sighted monkeys.

Now a numerous herd of zebras moved through the wood and across the clearing at a slow, careless pace. As they moved there was a bright shimmering of the variegated stripes of the beautiful "tiger-horses," and again they would often be blurred into one uniform grey. They mingled with the waterbuck, which took very little notice of them, and evidently had known the zebras for a long time. It was wonderful to see the proud waterbuck, with their horns, which are at once weapon and

C. G. Schillings, phot.

TELEPHOTO STUDIES OF VARIOUS ATTITUDES AND MOVEMENTS OF GRANT'S GAZELLES.

ornament, and the stallion leaders of the zebra herd all continually on the alert watching against their enemies.

There is a scuttling over the ground, for the little mungoose family, that live over there among the ant-hills, are making a sally from their fortress. Snake-like in their swift movements, the graceful little animals seem to glide along. Yonder two snake-vultures are looking for reptiles. Numbers of other vultures and marabous have flown down to the margin of the shallow water to bathe and drink.

Into the midst of all this gathering of animals there now come three ostriches, making for the fresh green growth along the marshy edge of the river-bank, and a number of francolins and guinea-fowl that gradually come crowding out of the undergrowth into the clearing to feed there. On the sandbank on which I look down as it extends far along the course of the river, there are some thirty huge crocodiles sunning themselves. I can see several smaller specimens of these mail-clad lizards on a flat part of the river margin not far from the sandbank.

Yesterday, too, six giant hippopotami paid a visit to this sandbank on the primeval river, and left tracks that my eye can plainly see in the glowing sunshine ; to-day, however, I have waited in vain for them to show themselves. But suddenly from the reed-beds on the opposite bank of the stream the mighty voice of an old bull comes booming across to me.

Over this most peaceful picture of animal life the tropical sun blazes, casting deep shadows. At this hour

of the day even the voices of the birds are generally silent. Only the melodious piping of the organ-shrike sounds somewhere near me, and often, too, the cries of one or other of the baboons which is being corrected with bangs and cuffs by an older member of the pack.

All the various kinds of animals assembled here get on quite peacefully together. They often almost touch each other, without taking the slightest notice of one another. Even the antelope bucks, adorned with dangerously pointed horns, make not the slightest use of their sharp weapons against the other species. All the time that I was looking down from my lofty seat I saw nothing but peace and good-fellowship. And yet how quickly a tragedy might interrupt this stillness and peace! The tracks of lions and leopards down there, the crocodiles on the sandbank, and the vultures hovering in the air told me that.

Often in this, and in other places, I have gained an insight into the life and ways of the animal world, and I have thus passed many enjoyable hours. Now one, now another species presented itself to my observation, but it was seldom that I saw such a large number of different species at *the same time*. But in all cases I have found that man is a disturbing element in the midst of such pictures of the animal Paradise. Even where I could feel sure that the appearance of a white man, a European, was quite unknown to the animals of the district, even then the very moment I showed myself the immediate result was a panic-stricken flight.

I have still clearly before my eyes the picture that

C. G. Schillings, phot.

WHITE-BEARDED GNUS AND ZEBRAS TAKING REFUGE FROM THE MIDDAY SUN UNDER THE SHADE OF THE MSUALLI TREE.

presented itself to me as I emerged from the overgrowth of creepers on the boughs of that uprooted tree. First a shrill cry from the monkeys. In a trice the little young ones were clinging to their mothers, and with long bounds the whole crowd of them galloped away over the level ground, hidden in a cloud of dust, and disappeared on the far side of the clearing. There a good many of them halted to look back. Of all the animals known to me only the baboons and the spotted hyenas take to flight in this way. The spectacle has such a surprisingly strange and unaccustomed, almost uncanny effect, that it always recurs to me when I think of these animals.

The antelopes follow the example of the fugitive baboons, after first rushing hither and thither, right and left, leaping wildly into the air. At this moment the impallah-antelopes, especially, make a splendid picture. Bounding along as if on springs of steel, they shoot up several yards high into the air. Wherever the eye turns it sees the graceful forms of these beautiful animals in all possible positions, making long bounds, some four feet high off the ground, and in every other attitude that one can imagine. But the end of all these splendid pictures, each seen for a moment, is a general stampede. Whirling clouds of dust in the far distance tell for some time longer which way the fugitives have taken.

But it is not every day that such varied pictures, so richly stored with the life of the primitive animal world of the tropics, present themselves to the traveller. And

it needs, too, a trained eye to enjoy all the separate impressions in their combined effect, as making up one masterpiece of Nature. But often, too, an almost too great wealth of beauty gathered together in a small space presents itself to our eyes. Thus, more especially, I keep a memory of these small idyllic lakes of the wilderness, that are hidden away here and there in the Nyíka district, and give a home to a wealth of animal life that often seems almost too abundant. We sometimes find one of the most interesting species of the larger mammalia, the hippopotamus, living here in somewhat narrow quarters, but thus more easily accessible to observation than in the great lake basins, where it lives in hundreds or thousands, but where also it can much more easily get away from the sight of the observer. It is true that one can see numerous heads emerging from the water in the distance, one can mark the thin spray of water blown from their nostrils, forming numbers of little fountain jets that glitter in the sun. But the peculiar life and activity of these giants of the animal world goes on chiefly at night, invisible to our eyes. In the smaller lakes it is all different.

I remember with pleasure a certain gathering of hippopotami in one of the lakes that lie hidden away between Kilimanjaro and Mount Meru, and which were discovered some years ago by Captain Merker. When I saw them there were still living in them some hundreds of hippopotami, and it was easy to watch their doings in the water. Gathered in herds they played about in the water under the bright sunlight, showing little sign

C. G. Schillings, phot.

IN THE MIDST OF THE VELT IN THE NEIGHBOURHOOD OF THE GREAT NATRON LAKE I FOUND A SOLITARY OLD ACACIA. THE DISTRICT WAS NEARLY WATERLESS. THE TRUNK OF THE TREE SHOWED THE MARKS OF ELEPHANTS THAT HAD RUBBED THEMSELVES AGAINST IT.

C. G. Schillings, phot.

A TYPICAL LANDSCAPE WITH ACACIAS AND SCATTERED BOULDERS—THE CAMPING PLACE OF MARAGO-KANGA NOT FAR FROM THE EASTERN 'NJIRI SWAMPS. NEAR THIS CAMPING PLACE MY PEOPLE SHOWED ME THE ALMOST UNRECOGNISABLE GRAVE OF AN ENGLISH HUNTER WHO HAD BEEN KILLED BY A BUFFALO. I HAD IT PUT IN ORDER, AND MY ASKARI (ARMED-FOLLOWERS) FIRED A VOLLEY OVER IT.

of timidity. Especially the young ones, that were still going about with their mothers, had so little fear that I sometimes saw them rising almost completely out of the water. They were also sometimes to be seen resting in the sunshine on the sandbanks by the lake margin. Some of these lakes were of such small extent that the animals had to come up to breathe at a distance of at most only some twenty yards from the observer. But all the same they were generally inhabited by quite a number of hippopotami. It was then a great pleasure to watch these beasts for hours at a time, from the lofty look-out place provided by the surrounding heights that rose steeply from the edge of the lake. They kept up good fellowship with the crowds of water and marsh fowl that give life to these lakes. All these animals displayed themselves to the spectator at as close quarters and as plainly as in a zoological garden. The rosy red pelicans fishing in flocks of hundreds at a time presented the most charming contrast to the uncouth quadrupeds. Even now in fancy these lakes come before my sight, lakes that lie far from all human ways and doings in a silent solitude. Dark clouds float over it. The proximity of the massive and dark Mount Meru often causes a cloudy veil to hang over that volcanic plateau with its crater lakes. Again I climb the steep cliffs that ring them round, and again my gaze sweeps over the level surface of the water. But though there has been no decrease in the numbers of the water-fowl that enliven the lakes, the hippopotami have, alas! disappeared. I found on the occasion of my last journey a small number still there, but I hear from Professor

Sjöstedt,[1] the Swedish naturalist, who lately visited these lakes, that the hippopotami, who had made the lakes their home since dim far-off times, have almost disappeared. The Boers[2] have killed everything. I came upon one here some years ago who was killing a lot of the hippopotami; others have followed up the work of this forerunner with more serious results. Attempts to make settlers at home in primitive regions are almost always inconsistent with a protection of the primitive animal world, even though these animals inhabit lonely upland lakes, hidden away in the wilderness, far from human settlements.

* * * * *

Thus in memory picture follows picture.

Besides the harmonies of the wilderness, the impressions of the eye are always those that come back alluringly in my recollections. However truly the artist may be able to reproduce all these various impressions, there is one kind that will always be missing from his pictures, namely, all the fleeting *movement*. To take

[1] Cf. also Prof. Yngwe Sjöstedt on the destruction of wild animals by the Boers in the Kilimanjaro district, in the *Täglichen Rundschau*, Berlin, 1906. Professor Sjöstedt travelled through these districts for the purpose of making a collection of their fauna for the Copenhagen Museum, and visited the Merker Lakes with a view to securing a hippopotamus.

[2] The destruction of wild animals by the Boers in the Kilimanjaro district was in every way opposed by the central and local authorities, but failing the possibility of strict control it does not seem to have been possible to make the regulations effective. Prof. Sjöstedt found the Boers in no way settled down, but roving about the country in pursuit of the wild animals.

C. G. Schillings, phot.

HUNGRY VULTURES NEAR MY TENT ON THE TREELESS VELT.

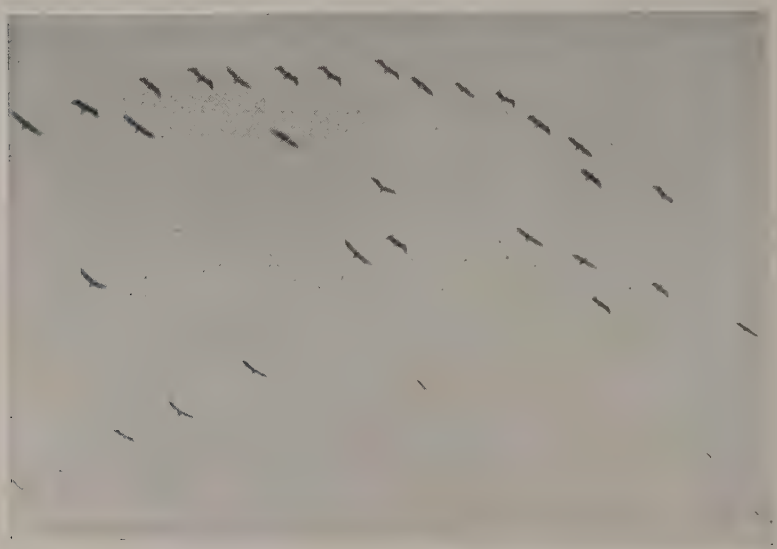
as an instance only one out of an abundance of forms, who can reproduce in pictures the endless variety of birds, the world of winged life! Every day added to my knowledge of these multitudinous flocks, through the increase day by day of my bird collection, which I obtained at the cost of much labour, and which has been the means of giving to science many hitherto unknown species. As I added each new bird to it, I added also to my knowledge of these beautiful creatures, as yet so little known, and slowly, very slowly I became familiar with them. What splendour of forms and colours! In what enormous flocks does the feathered race inhabit the wilderness and the primeval forest! The Biblical account of the flocks of quails in the desert sounds to us like a legend, and yet it is no legend. At times when we too were marching across the same kind of ground, there flew past us with a whirr of many wings huge flocks of quails, that sought and found their safety in flight. At times I have also seen similar flocks of snipe. How long has it been since both these kinds of birds appeared in such flocks in our country at home?

The endless variety of form and colour, the movements of the animals which the eye perceives under the ever-changing tropical light, that shows everything brilliantly and sharply defined, all this taken together makes up memory-pictures of a charm that nothing can surpass. But he only can picture them to himself who has gone forth and made them his own.

The huge sea-turtle comes creeping along, emerges from the waters of the Indian Ocean, and makes for the

sandhills to lay its eggs there. Its giant track on the sand leads me to its nest. To my astonished eyes this peculiar track looks as if a ploughshare had torn through the ground.

The Indian Ocean, which is the home of this huge sea-turtle, shelters also in quiet bays the strange Dugong or sea-cow, and great is the surprise of even the natives



FORMATION OF A FLOCK OF FLAMINGOES IN FLIGHT.

themselves when from time to time they capture in their nets this remarkable creature, which is becoming rarer every year.

In the lagoons one sees emerge from the surface the head of a great giant snake, a good five yards long, the African python; others I have come upon suddenly on the open velt. There are continually thrilling

C. G. Schillings, phot.

FLIGHT OF FLAMINGOES (TAKEN AT SHORTER RANGE. THERE WERE THOUSANDS IN THIS FLOCK).

moments! It may be that memory conjures up for us the delightful fairy-like image of a rare dwarf antelope seen perhaps once only in the shades of the forest, a dwarf antelope that, with strange large eyes and ears alert, watches one's approach, and then like a flash of lightning disappears in the thickets; it may be that in memory one sees the reddish brown, mud-smeared body of a giant elephant emerge from the midst of some densely tangled primeval forest; it may be that a tree suddenly bursting into bloom yields me a wonderfully beautiful new kind of bird, which I grasp in my hand, delighted with its robe of feathers; it may be that suddenly the massive giant form of a rhinoceros appears before me in the tall grass, unexpected, menacing, standing as if chiselled out of stone; it may be that my free gaze ranges without limit over the wide prospect, and sees in primitive abundance the strange life of the tropics; in every case the impressions received seem to the beholder fascinating beyond description.

Monotonous as the surroundings of the landscape may appear to the newcomer, poor and barren though the velt may seem to be for weeks at a time, yet, enlivened and permeated by the mighty flood of all this strange animal life, it has a beauty and a charm whose influence no one can escape who makes his way into the midst of it with open heart and eyes.

He who looks around him with clear-sighted vision, and tries to see more than others, has revealed to him the beauties of Nature in the greatest and most wonderful way, and is drawn in the highest sense of the word to admiration of them. Here is verified, as Sir Harry

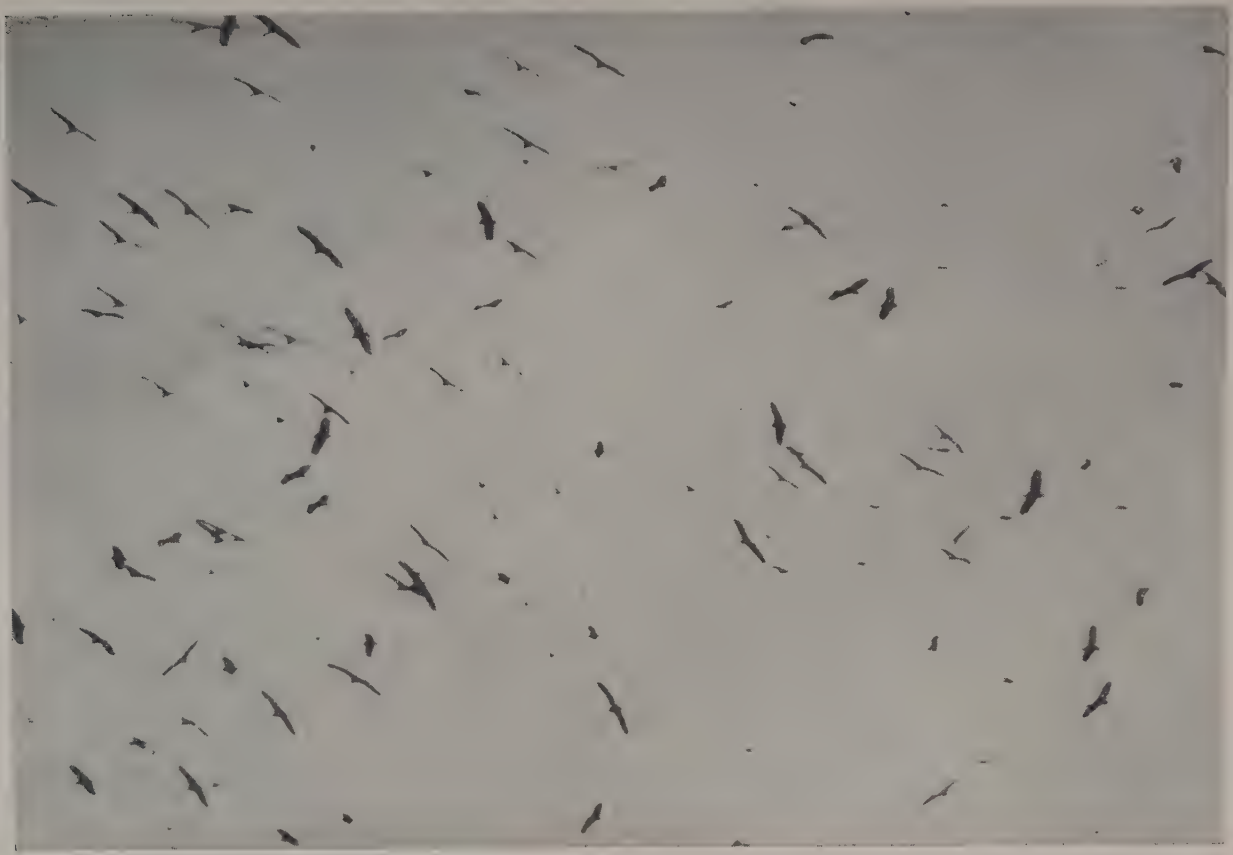
Johnston says in his preface to my first book, "the old nursery story of eyes and no eyes."

It is thus that I lie for long hours in the wilderness, and observe, admire and enjoy. What a wealth of impressions is brought before the eyes among these ever-changing, at first strange but gradually familiar sights, in the midst of the foreign-looking landscape, bathed in a light that has a marvellous influence, and in its full power is almost blinding.

Now the dwarfs, and again the giants of the animal world rivet our attention. But it is especially the *primeval abundance*, the great profusion of large and small wild life, that gives an impression that is now delightful, now overwhelming. One must have seen, with the eye of the hunter, gigantic old bull-elephants in the primeval forest, great herds of rhinoceroses and giraffes in one single day, thousands of zebras and antelopes gathered together—one must have felt all this profuse wealth of life, to be able to understand its full beauty and grandeur.

Yet there are days when one looks around in vain for all this life and activity, when, on account of the weather, or some other reason, the animals do not show themselves so freely. One must also take due account of the extensive periodical migrations of the African fauna. *Many an erroneous judgment as to the alleged scarcity of wild life, in districts in which other hunters pursued the chase at an earlier date with success, is to be thus explained.*

But, on the other hand, there are also days when such an abundance of animal forms presents itself to



C. G. Schillings, phot.

THIS TELEPHOTOGRAPH OF STORKS ON THE WING WILL GIVE SOME IDEA OF THE HUGE FLOCKS IN WHICH THEY START ON THEIR NORTHERN MIGRATION IN FEBRUARY.

C. G. Schillings, phot.

WHITE STORKS GATHERING FOR THEIR NORTHERN MIGRATION TO EUROPE.

our eyes, that the most lively imagination can form no idea of all this profusion. On such days, I have often wished that one could have a gigantic photographic apparatus, an instrument that would be capable of making a record of all I saw. But on such days, also, I have more than once made a mental apology to explorers whose lives have long closed in death. When, for instance,

REMAINS OF RHINOCEROSES KILLED BY THE BOERS ON THE SHORE OF ONE OF THE MERKER LAKES.

in former years I had looked over the sketches of the late Cornwallis Harris, sketches showing the life of the South African fauna as he saw it about the year 1837, I more than once had my doubts about the correctness of his representations of it. As the result of what I myself have seen, I have quite given up such doubts.

The original sketches left to us by Cornwallis Harris

(which I must say do not always rise to a high level from the artistic point of view[1]) are coloured sketches accompanied by descriptions, and show us such multitudes of wild animals that they seem to border on the fabulous. For we see in them elephants, rhinoceroses, giraffes, buffaloes, zebras and antelopes, all gathered together in crowds, and thus one inclines involuntarily to the opinion that all these have been brought together in one picture merely to give illustrations of the various species. But my own observations have shown me that our artist is perfectly correct. One sees how necessary it is to make documentary records of such observations. The men of a later time, as I plainly realise, may be able to place before themselves a picture of all this primitive abundance of animal life only with the greatest trouble and by means of earnest study of every authority bearing on the matter.

Enormous periods of time must have gone by to develop all the beauty and splendour of this so varied and so highly organised life. My thoughts range over far distant times. I see, looking so near that it seems as if one could touch it with one's hands, one of the mightiest volcanoes of our earth gradually unveiling itself and stripping off its robe of clouds. The volcanic regions below it remind me of the story of how all my surroundings were developed.

Born in fire, and evolved, differentiated, and formed to

[1] It appears that the explorer completed some of these sketches after his return with the help of stuffed specimens, but he drew others entirely from nature on the African velt.

C. G. Schillings, phot.

CRESTED CRANES IN FLIGHT.

C. G. Schillings, phot.

IN A WONDERFULLY SHORT TIME VULTURES AND MARABOUS FLY DOWN FROM AN EXTREME HEIGHT IN THE AIR TO FALL UPON ANY DEAD ANIMAL.

so much beauty, which no hostile hand has yet come to destroy, the scene around me is so splendid that my eyes keep ranging over it, more and more eager to contemplate all its splendours.

A strange feeling comes over me. I think of all the beautiful spots of our old world. They have all been taken possession of under carefully devised arrangements and methods, well protected by the eye of the law, and often only occasionally open to access, and then on condition of payment. But the beauty I am contemplating has now been hopelessly abandoned to intruders, who have neither knowledge nor taste nor sense, and who are at this moment so barbarously destroying it.

But these thoughts must give way to others that are more pleasant and consoling. How wonderful to be able to revel in this wilderness, to feel in oneself the influence of all these splendours, notwithstanding all dangers and all difficulties, however great! Everything around us undulates and shimmers, bathed in a dazzling sea of light. Gradually the colouring of plain and hills, the dome of the sky and the whole surrounding landscape, changes to duller and less definite tints. The sun-illumined air rises in waves from the earth, and the various strata of it form an ever-changing chaos of reflected light. Over all there is deep peace. A spell that accords with the mood of the moment seems to stream down from the dome of the sky over this solitude, lying so far from the noisy activity of the world.

All that I here behold has been going on since those far times, directed by natural law, in ever-recurring

succession. But to-day for the first time a member of the complex society of civilisation takes delight in this mountain rising amidst all this primeval beauty.

Who could possibly set down this poetry upon paper—the poetry of the velt and its wild inhabitants, the moods of East African Nyíka? The master of colouring has not yet arisen who could give us a picture of these mighty gatherings of wild herds, and of these deserts that seem overcrowded with animal forms, that yet live so peacefully together, nor can the master of the pen, though he may have been able by his words to conjure up some idea of them in the mind.

One who has perhaps felt and enjoyed their spell more than any one else is Alfred Brehm. But he has travelled only in regions that had long been under the influence of man and his activity. He has only once seen the king of beasts, and has never looked upon the giraffe—whose beautiful eyes the Arab compares with the eyes of his beloved—and many other forms of the African fauna.[1] Nevertheless he has done wonders, thanks to his deep feeling for his subject, his intimate understanding of it, and his incomparably poetical power of description. He has given us imperishable pictures in words that are among

[1] So too, for example, Wissmann never killed a lion. This is sufficient proof of the difficulty of observing animal life. The author may take this opportunity of calling attention to the remarkable work of this departed explorer, *In den Wildnissen Afrikas*, and thinks himself fortunate in the possession of a letter from his hand approving of his method of observing animals. This letter expresses in words that go to the heart the love for and understanding of the beauty of the African fauna that characterised this successful and distinguished explorer.

C. G. Schillings, phot.

TELEPHOTOGRAPH OF A HERD OF WATERBUCK (*COBUS ELLIPSIPRYMNUS*, Ogilb.) RUNNING AWAY.

C. G. Schillings, phot.

ORYX ANTELOPES (*ORYX CALLOTIS*, Thos.); "CHIROA" OF THE SWAHILI, "OL GAMASSAROK" OF THE MASAI): A MOST DIFFICULT ANIMAL TO STALK.

the most beautiful that have ever been written about Nature. Our old famous teacher, Dr. Schweinfurth, has seen and described similar scenes. With these two we may rank in equal honour the name of the German explorer Richard Böhm,[1] who unhappily lost his life so tragically and at such an early age on the shores of Lake Upämba in Southern Urúa, of which he was the discoverer. Many others might also be named who were deeply influenced by these primeval splendours. But the fauna of South Africa has vanished unsung and unfamed, before any artist or master of words arose to place in a fitting way its beauties on record for all time!

Masters of words like Ludwig Heck, by whose skilful pen the life of the mammalia has been lately described anew for us in Brehm's *Tierleben*, and like Wilhelm Bölsche, would perhaps have been capable of grasping and reproducing the impressions that the traveller feels in those far lands. But they have never trodden these distant countries, and they must therefore confine themselves to describing artistically and yet truly what they have never actually seen, from ideas based on their own clear understanding of the observations of others.

The sun is setting. It is time for me to come down from my hill and return to my camp. The sun goes to his rest in flaming splendour, there is a glowing radiance of violet and purple light; soon dark night will surround

[1] Take, for instance, his description of the Ugalla River in a letter to his grandfather, General von Meyerinck, in his work *Von Sansibar zum Tanjanjika* (published by Hermann Schalow, Leipzig, 1888).

me. Thoughtfully I tread my homeward way, with my mind richly stored with impressions, but anxious as to my efforts to describe all that I have seen, and doubtful as to my success.

"To have passed a thousand and more days, a thousand and more nights in the wilderness with a great longing in my heart in some way to grasp and make my own all the splendour I have seen and all its charm; to have again and again delighted in the beauty of the Nyíka: this does not make me capable of reproducing it. And even if after many decades of years I could fully comprehend it, I should never succeed in reproducing it in its full significance and bringing it home to the minds of those who have never looked upon it with their own eyes."

So runs a passage in my diary.

Descriptions of things similar to those that I have told of in inadequate words in these slight sketches of the Nyíka district of East Africa may be read of other regions of our earth. The life and activity of the Arctic fauna, of those gigantic creatures of to-day, the whales, and of the Polar bears, the musk oxen, the wild reindeer, the walruses, the seals—those most sagacious creatures—and the life of many other animal forms—all these together are waiting for the hand that will describe them in word and picture and put on enduring record for all time this changing life. Thus only will a new existence be given to those forms of life for which the sentence "Vae Victis!" has gone forth,

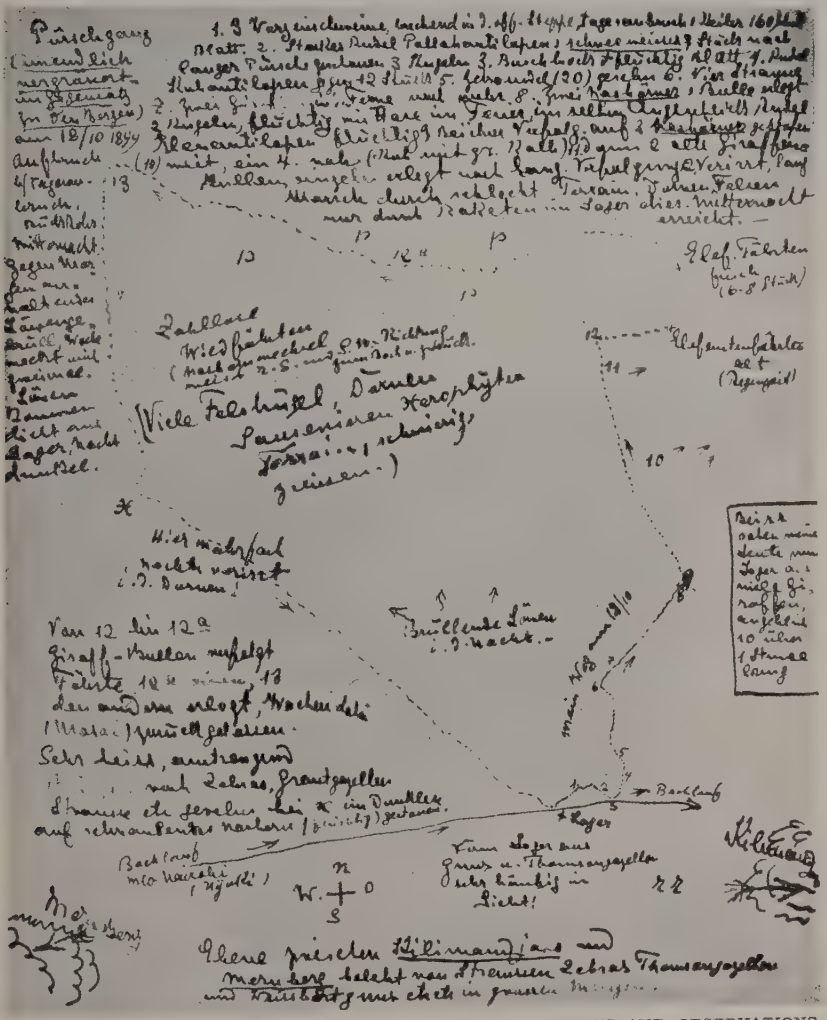
May the master soon appear who will be able to

C. G. Schillings, phot.

GRANT'S GAZELLES.

C.G. Schillings, phot.

HARTEBEESTS IN THE NEIGHBOURHOOD OF THE WESTERN 'NDJIRI SWAMPS.

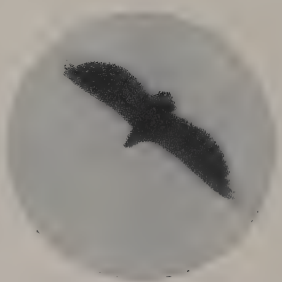


A PAGE OF MY DIARY SHOWING HOW I NOTED MY MOVEMENTS AND OBSERVATIONS BY MEANS OF A ROUGH MAP.

give us a noble and true picture of the East African Nyíka in all its vast proportions. For, as the night

is now descending on the wilderness, so will an everlasting night soon come down upon all the life and movement that I have tried so inadequately to describe in merest outline.

About a century ago the "Twilight of the Gods" (*Götterdämmerung*) began for all the wild life of the Cape region of South Africa. Even before these hundred years had run out it was ended; this abundant flood of life had disappeared. . . .



BATELEUR EAGLE IN FLIGHT.

C. G. Schillings, phot.

LIKE A ROSY RED CLOUD THE FLAMINGOES FLY DOWN ON THE MARGIN OF THE NATRON LAKE.

A FRANCOLIN PERCHED ON A THORN-BUSH.

VII

The Voices of the Wilderness

THE German sportsman knows well the mysterious charm that speaks to the listener, when in the woods in spring he hears the note of the woodcock and the cry of the ptarmigan, and when in autumn he hears the call of the stag to its mate. It must be that the listener is subject to some atavistic influence, some impulse rooted in the dim past now quickening into life.

Let him who understands this charm follow me through the equatorial wilderness, and listen with me to the music of songs and notes that we may call the language of the Nyíka. We shall hear it there on every side, by day and by night. True, fully to understand this language one should have King Solomon's magic power, which made its possessor understand the speech of animals, or like Siegfried have dipped one's hand in the blood of

the dragon, and thus have acquired the gift of holding converse with the birds.

This much is certain, in the wildernesses of Africa this primeval language is still to be heard. In our hunting grounds at home the voices of the aurochs, the bison, the ibex, the bear, the lynx, and the wolf have been silenced, and many other voices that have belonged to the wild open country since primeval days have all but died away. I have indeed learned to understand only a few words of this language of the wilderness, though I have heard thousands of its sounds. But I may be able to tell something about it.

What a strong and deep impression this world of sound makes upon the traveller at so many hours of the day and night! Every region, every different kind of country has its own characteristic harmony. One does not always hear it—it depends upon the season of the year and the time of the day, on the changes of weather, and much else. But when one has become even to some small extent familiar and conversant with these various voices, one enjoys this music-language of the Nyíka with a sense of deep delight and ever growing understanding. Sometimes it is most difficult to find out the names of the individual speakers. Often they keep very quiet; they seem to be like great vocalists on tour: they appear suddenly, and then disappear again for a long time, without letting one see any more of them. Then the traveller may often listen long, in vain, for the singer—gone without leaving a trace behind. But it is not only the soloists that charm us. There is also the combined effect

of all the voices of nature uniting in one vast impressive chorus. This has made such an impression upon me that I shall try, so far as my limited powers permit, to describe it to the reader. This musical language of the wilderness is in itself powerful, rich and impressive, but all this in a still greater degree for him who, observing things with the eyes of a seer, knows many of the voices that resound in it will not be heard much longer. Although for long, long ages, through hundreds of thousands of years, this tumult of sound has been heard, these voices, or many of them, will soon be silent victims of civilisation! They are going, and with them many of the euphonious names of places with which the natives have distinguished every spot, but which the Europeans, as they penetrate into the country, feel themselves obliged to change.

It may seem that I myself am not quite guiltless of such misdeeds. It is true that I named an island, that resort of the wild buffaloes in the Pangani River, "Heck Island," in honour of Professor Ludwig Heck. But the island had till then no name whatever. One feels sad, on glancing over the map of Africa, to note the degradation of so many old traditional names, which is in no way justified, and is a sign of the hasty and violent introduction of civilised life. "The Boers are not people who think much about natural history," says a writer somewhere. And in fact, through their agency, the euphonious names of the various wild species of South Africa are now to a great extent already obsolete. They hastily gave vulgar-sounding names of

their own to the wild animals.[1] Thus the oryx antelope became the "gemsbock," and the cow-antelope, because it was tenacious of life and difficult to kill, the "hartebeest." The gnu, on account of its wildness, was called the "wildebeest," the bustard the "pauw,"[2] the hyena the "wolf," and the giraffe—incredible though it may seem—the "kameel"! Hand in hand with this went the changing of place-names: so we read of "Hartebeests Fontein," "Olifants River," "Kameeldoorn," "Zwartkop," and we have a whole series of unpleasant, and sometimes utterly ugly names by the introduction of which the beautiful aboriginal names of various places have become obsolete. Thus not only do the primitive inhabitants of the land disappear, but their names, too, are blown away upon the wind.

Countless are the voices that resound by day in the Nyika. But by night these voices speak still more mysteriously and wonderfully to him who listens to them, bringing him into still closer union with nature. From the multitude of these voices I choose a few only.

Old memories come back to me! It is in the year 1896. I have just landed, and am sitting in my night shooting-encampment by an inlet of the sea near Dar-es-Salaam. A concert of the voices of nocturnal birds mingles with the sharp buzz of the mosquitoes. Again and again one hears a strange cry. Unspeakably sad and monotonous, this peculiar sound rings out over the

[1] Unfortunately such ridiculous and ugly names as gemsbock, hartebeest, wildebeest, etc., have gradually come into general use.

[2] *Pauw* is Dutch for *peacock*.

C. G. Schillings, phot.

FLIGHT OF SANDFOWL.

waters of the inlet; in the distance a changing answer comes back in response to it.

I did not then suspect *that it would take me nearly a year* to be absolutely certain that this sound was uttered by an extremely shy and restless kind of cuckoo!

This sound of the African night always made the strongest impression upon me, and remains indelibly in my memory. All that one heard from near at hand, or from the distance miles away, had its origin not in man's voice or in human activity of any kind, but must come from birds and beasts to a great extent unknown to us. One had to interpret, to conjecture, to build up theories. Often one struck upon the correct solution. But often enough, too, the interpretation one accepted proved to be false, and then one's anxiety to find out the true solution, aroused anew, was doubly keen. The first time I heard it, I had no difficulty in interpreting for myself the cry of the monkeys harassed in the night by leopards, a screaming of a kind one cannot easily forget, plainly expressing the greatest terror. The first time one heard the neighing of the herds of zebras it was much more difficult to recognise the sound, and the gobbling cry of the ostrich had at first a still stranger effect. But as soon as I had heard the voice of the zebras a few times, it was clear to me that the extinct *quagga* of South Africa must have derived its name from its cry. If one puts the accent on the second syllable, and pronounces the *g* softly and deep in the throat, one has, as one repeats it, a wonderful

reproduction of the cry of the zebra as I heard it myself.[1]

What a pity that all this cannot be put on permanent record by some such apparatus as a gigantic phonograph! But unfortunately we are still a long way from such a possibility.

No one will be surprised at my keeping specially in mind that endlessly melancholy cry of the cuckoo in the darkness. How lonely and empty our German woodlands would seem without the cuckoo and the cuckoo cry! As a matter of fact the African primeval forest *never* hears the same cry that has become so dear to ourselves. Our cuckoo, migrating in a few days all the way from the north to the equator, flies in restless haste through wood and plain, but *he is silent.* His cry is heard only in our country at home. But in the East Africa district of Pori, amongst many other cries those of two species of cuckoo are heard in rivalry. These are the sickle cuckoo—the "Tipi-tipi" of the Swahili—a reddish-brown fellow that flutters in heavy flight everywhere about the bush, the reedy bogs and hill-slopes; and the solitary cuckoo (*Cuculus solitarius*, Step.), about whose cry I was for a long time mistaken. The unceasing, low cry of the former, the sickle cuckoo, if it is heard even a few times, can never again be forgotten. It sounds like —"Dut-dút—dududu—dut-dút." One hears it by day and also in the darkest night, contrasting strongly with the

[1] Cf. Prof. P. Matschie, *Die Säugetiere Deutsch-Ostafrikas* ("The Mammalia of German East Africa"), p. 96, and my work *With Flashlight and Rifle.*

sharply defined, clear note of our European cuckoo, though the latter listens in silence to the cry of his cousins all through the winter under the equator. This cry seems to me, with its low, dull, softly prolonged tones—so different from the louder cry of its northern relative—to be quite in keeping with its mysterious tropical home. For the sickle cuckoo knows all its deepest mysteries, and no bird ranges so unweariedly through the densest thickets and over the most inaccessible regions. In the most hidden, solitary, and unknown spots[1] it would come fluttering up from the ground at my feet, often startling me. It seemed to me as if the bird wanted to call my attention to newly discovered mysteries, as its "Dut-dút—dududu—dut-dút" came sounding to me, now here, now there, low, soft and melodious, by day under the brooding noonday heat, and just the same in the midnight hours.

At night, too, he is seconded, as I have already mentioned, by his more timid cousin, with an ever repeated "Kí-kü-kü—kí-kü-kü," that resounds monotonously in the distance.

There is a strange charm in continually hearing these voices again and again, without knowing the little singers; and a triumph at last in making out which they are.

"During a sleepless night," said Richard Wagner, "I once went out upon the balcony of my window on the Grand Canal at Venice. As if in a deep dream the legend-haunted city of the lagoons lay spread out before

[1] From the Cameroon district in West Africa Professor Yngwe Sjöstedt writes to me also of a nearly related species of cuckoo that has much the same cry.

me under the darkness. Out of the soundless silence there came the loud call of a gondolier waking up just then on his boat . . . . then from the farthest distance the same call answered back along the dark canal; I recognised the old, melancholy, melodious sounds, doubtless as old as the canals of Venice and their people. After a solemn pause the far-sounding dialogue at last began, and it seemed to me to melt into harmony, till the notes heard close at hand and coming more softly from afar died away as sleep came back to me again."

Who could describe in such noble words the impression made upon our minds by the spell of the sounds and songs of the nocturnal wildness, and all its strange and beautiful music? All that at first is strange there, and even alarming, comes gradually to be something one loves intimately. Shall I ever be able to listen to it all again? Who knows? Let me try then to make some record of what I have so often heard, and in these few sentences attempt to give some faint echo of these once familiar voices.

We are in the midst of the great forest. Giant podocarpus and juniper trunks rise up towards the sky. It is cool and shady all around us here; we breathe a moist, and not unfrequently a musty air. The sunlight plays only upon the tops of these giants of the primeval woods, and can but scantily illumine the almost bare ground below them, sending here and there shimmering, dancing rays of light amongst the tree-trunks. High overhead the giants arch their branches, interlacing them in a vast living roof of green. Only where clearings

C. G. Schillings, phot.

ZEBRAS AND GNUS.

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make a break in the mass of trees, a sea of light floods all the ground—a flood of light so strong that our eyes, accustomed to the obscurity, the mysterious semi-darkness of the forest, are dazzled, and there comes to our minds involuntarily recollections of old Bible pictures, in which such floods of light are shown streaming down from heaven to earth. A confusion of trees, creepers and undergrowth, with amidst it uprooted tree-trunks lying mouldering away; the earth black, and often marshy; no road or way far and wide, but only here and there the tracks and beaten paths made by the elephants and rhinoceroses that have roamed the old forest since primeval times.

Deep silence all around. If the traveller stands still and holds his breath, this silence seems to weigh down upon the soul with a weird force. At such moments it is as though some vague disaster threatened, or something wicked and dangerous were creeping around unseen.

Suddenly, a squealing and chattering. There is a scurry up and down the tree-trunks, and again there is a strange sound of spitting and growling. Just now there had come over us a feeling such as is expressed in Böcklin's [1] masterly picture, directly inspired by nature, *Schweigen des Waldes* (the "Silence of the Forest"). We had almost expected each moment that legends set before us by the power of his genius would here become

[1] Franz Hermann Meissner in his work, *Arnold Böcklin*, says: "I have often found that I had to consider these pictures with the blue eyes of an old Ostrogoth seer of primitive days." And I am of opinion that in order to take full delight in the charm of the tropics one must look on them with *northern* eyes.

realities; we felt that here one might surprise nymphs and dryads. The spell is soon broken. The gnomes of the primeval forest, the tree-climbing hyraxes, have scared away the silence. Wonderful to say, these dwarfish *hoofed animals*, the nearest still surviving relatives of the rhinoceros, are here scrambling up and down on the trunks of the venerable trees.

From all sides, from every spot, every direction, there resound the same cries, and again there is silence all around us. Here, far in the depths of the primeval forest, the bird world seems to have no home. But hark! I hear a curious chirping, and I notice on a bare bough above me one of the most gloriously coloured of African birds, the banded trogon (*Heterotrogon vittatum*, Shell.), which, uttering a most peculiar sound, is carrying on its characteristic sport—flapping its beautiful wings.

Then loud-sounding trumpet-like notes break on the ear. We hear a rushing in the air, and big horn-bills with their huge beaks come sailing, as I judge by their cries, through the air, and alight on the top of a giant juniper (*Juniperus procera*). They, too, fly away after awhile; their trumpeting dies away in the distance, and again there is silence all around. Their voices and that of the brightly coloured helmet-bird give to the primeval forest of Africa a strange charm that is all its own.

But now there suddenly breaks forth a remarkable sound, rising and again falling as I listen, a strange music of a most peculiar kind. It is the chatter of the colobus monkeys, a sound that cannot be described in words.

A party of these wonderful creatures seems to be in good humour, for their song comes to me in chorus unceasingly, and in rising strength. "Murúh-murúh-murúh-rrrrrrmúh rrrrrrmúh-murúh quoi-quo-quo-quo-rrrr," it sounds, now swelling strongly out, now gently dying away. These, too, are doomed to death, who now are letting us hear their primitive song, that in our days may so easily be

AN ALARUM-TURACO (*CHIZAERHIS LEUCOGASTRA*) IN ITS PLACE OF SAFETY AMONG THE ACACIA THORNS.

their death-song; for these monkeys are keenly hunted for the sake of their beautiful fur, and their song often betrays them to the hunter, eager for their spoils. Some poisoned darts, which I find here with points as sharp as needles, and which were once shot with a bad aim at the little monkeys, are evidence enough of this.

And again I hear the great wood ringing and echoing

with the countless cries of birds. There was a time, too, when the call of millions of the now all but extinct passenger pigeon resounded in North America; so, too—and of this I have no doubt—the cooing of the ringdoves was heard repeated by thousands of birds in our beech and oak woods at home when the acorns and beech-nuts were in season.

On the lonely uninhabited western slopes of the highest giant mountain of the German possessions, Mount Kilimanjaro, certain forest fruits flourish in profusion. There is heard on every side a strong, sweet-sounding dove-note, like that of our ringdove. A handsome large species of wood-pigeon (*Columba aquatrix*, Tem.) has gathered in hundreds of thousands. The rustle of their wings, as they rise or come down in great flocks, mingles with their beautiful calls and cries; the ear can hear nothing else. Voice, form, and movement so strongly remind one of our own ringdoves that one feels carried away to far-off, familiar scenes, and the illusion is helped by the character of the Kilimanjaro landscape, which in certain of the higher regions has less of a tropical than of a northern aspect. How strange it is; the cry of this bird all at once transports the traveller to his own land! Truly *there is a magic in sound.* With the poorest appliances, the slightest equipment, the creative fancy can in a moment build a bridge to the Fatherland. The call of this beautiful dove sounding here on every side, its love-inspired circling high in air above the tops of the giants of the primeval forest, surrounds it with a dream-picture, and makes me suddenly breathe the air

of the beech woods. I am in the northern woods in springtime; cool and fragrant the northern air blows round me. But ah! thousands of miles of land and sea divide me from all that, and cool reflective reason counts only on the possibility, not the certainty, of my ever seeing my native land again.

And yet this beautiful picture has a strengthening and consoling influence. It drives away the trouble of home-sickness—a dismal thing!

I can hear many other voices besides these in the primeval forest. But those that impress themselves in the most completely enduring way on the memory are the strange cry of the tree-hyrax, the peculiar note of the hornbills, that calling of the doves, the remarkable chorus song of the 'Mbega monkeys, strange beyond all description, and the trumpeting of the lord of the primeval forest, the elephant.

Another tone-picture—an early morning at a drinking-place in the desert. One could feel the cold in the night, but the quick coming warmth of the equatorial sun's rays has soon roused the animal world to active life. There is the cry and call of the francolins on all sides. But the chief part in this early concert is taken by the thousands of turtle-doves, flying from all directions to the water. Everywhere a murmuring and cooing, that the Masai are able to re-echo so incomparably in the name of the turtle-dove in their language—"'Ndurgulyu." As an accompaniment to this, there is the rustling and wing-clapping of all the feathered visitors at the water. Towards evening the air in the neighbourhood

of a much-visited drinking-place is literally filled with these beautiful and swift-winged birds. The rustling and beating of their wings in rapid flight makes in itself a concert. I not unfrequently came upon places that bore the name of the "Doves' water," or the "Doves' resting-place." All the various voices of the many species of doves that find a home in the Nyíka resound again in the traveller's ears for years after. Whether it be the strange voice of the parrot-pigeon, that ushers in the concert with a hollow "Krūh-krūh" and follows it up with some remarkable notes, or the melancholy cry of the little steel-spotted pigeon that comes to us from the thickets, or the strong, loud-sounding love-notes of the already-mentioned *Columba aquatrix*, Tem., so like our ringdove, or, above all, the familiar sweet voices of the many small kinds of turtle-doves—all these sounds, the rustling and fluttering and beating of wings, the living, moving picture presented by all these beautiful birds, belong inseparably to the essence and being of the Nyíka. When the turtle-doves greet the morning with their soft cooing, their call is answered from afar by strange guttural tones borne swiftly through the air, sounding like "Gle-glé-lágak-glé-ága-ága," from the velt-fowl hurrying like themselves to the water. Brehm, in his *Leben der Vögel*, has already raised a poetical monument to them made up of beautiful lines. But I could not picture to myself the morning concert of the bird world in the Nyíka without the strange cry of the sand-fowl and the cooing of the doves, and the peculiar sound of the beating wings of the velt-fowl as

they rise in scattered flight from their resting-places,—a sound that impresses itself strongly and distinctly on the ear, more than that of any other bird I know, as the "Klack-klack-klack" of the rising woodcock strikes the ear of the sportsman in Germany.

The wonderful flight of the velt-fowl, their calls and cries, their hurry and bustle, afforded me ever new interest. It always seemed to me as though the wide wilderness here sent out its lovingly guarded favourite children as envoys, with the mission of making it known that even now, in this dull, barren time, life has not died out even in the most remote deserts. So I see and hear them once more in fancy, beautiful, timid, and full of the joy of life. It is thus their countless millions enliven the wastes of Africa, as well as the endless tundra marshes of Asia.

Deep, long-drawn-out notes, like those of musical glasses, ring in my ears. The brooding noonday heat is round me. The sun is in the zenith, and hardly another sound is to be heard all around. The wilderness lies before me in the hot glowing sunlight as if dead. My weary bearers have given themselves up to a dozing sleep, at the place where I have at last halted, after a march of many hours with a few companions.

Before me is a miniature mountain-world lighted up by the dazzling sunbeams. There is a mass of precipitous rocks, so characteristic of the Masai-Nyika district, that stretches away into the distance. The Candelabra Euphorbias spread out their strange forms against the light, in grotesque clumps, and seem to me to make

themselves one with the rocks, whose inorganic character and nature appear to be repeated in their characteristic forms.

From out of the midst of this stony wilderness these remarkable notes come sounding in my ears. They seem to be mysterious voices of rock and stone. The eye searching expectantly for the singer that is uttering this bell-like melodious music can discover nothing. And yet the notes come from the throat of a bird. It is once more some hornbills that are making their song of love and wooing resound in this wilderness. I have been able to listen to them for hours, losing myself in dreams, and I cannot say why I seemed to identify precisely *these* bird-voices with the voice of the African Sphinx, that legendary Sphinx which has sung already to so many, and lured many back again for ever. Thus may the songs and voices of the old sanctuaries of Northern Africa once have been. Again and again, when I heard it, I had to think of those men who, with burning longing in their hearts, went forth into the Dark Continent to wrest from it the secrets of its fauna, but had to pay for the undertaking with their lives.

A burning glow of sunshine, a dazzling light in overwhelming abundance over all the desert waste of rock—and amidst it, again and again, that deep, ghostly, metallic note, that directly impresses the traveller as though it were the language of the wilderness, peculiarly its own. But how can I describe all this in words?

And at a moment like this, as if to heighten the effect, over there the voice of the mightiest bird that the earth

C. G. Schillings, phot.

NESTS OF WEAVER-BIRDS ON THE BOUGHS OF AN ACACIA.

bears in this our day sounds forth. I hear in the distance the ringing cry of a hen-ostrich, and I listen to it with attention strained to the highest point.

The strange duet has now long died away. But it often comes up to me again in the midst of the movement of civilised life and takes me back on the wings of fancy to the glorious beauty of the wilderness.

But that uncouth tropical singer is not really needed to conjure up this frame of mind. A little unseen *lark*, all by itself, can evoke for me the charm of the solitudes of Nyíka as with a magic wand.

How this comes to pass, I will tell the reader. We must make a long tour. Now we are in the north, in our native country, in the midst of the spring, amongst the spreading fields of our German homeland. The song of the lark fills the air, and our heart expands to its music. We go out upon the open moor. We hear a trilling and quavering of another kind, with a strangely sweet touch of sadness in it, especially at night—the song of the woodlark. But now let the reader follow me to the little island of Heligoland. In the glare from the lighthouse, that sends afar its rays,—in this case rays that bring destruction,—countless numbers of larks flutter and wheel about, bewildered in the darkness of the autumn night, and full of anxiety and fear. On a dark, rainy October night thousands of them fall victims to the death that lies waiting in ambush for them below this tower raised by the hand of man. Their little wings have brought them safe over the ocean to the small island. But there one hears no rejoicing song. No! there

resounds only something like an agonised cry for help from weak creatures in the direst peril of death.

Millions of larks fly thus each year southwards and northwards, obedient to that mysterious migratory impulse that guides them on their way.

The song of the lark and the cry of the lark are very different things. To those who know them they mean a song of happy springtime, and a cry for help in the night of death.

How comes it that I thus speak of, and have to think of, sounds uttered by the birds here at home? Simply because over there, in other lands, my fancy so often and so readily imagined the flying bird to be a messenger,—a courier for thoughts of home,—and connected such wishes and longings with its appearance and disappearance.

In autumn, the noblest of our northern songsters makes its way in a few days and nights into the inmost heart of the Dark Continent. It disappears again in spring, to return to the north over velt and desert, morass, mountain and sea. The cuckoo, that only a few days ago could be seen in our northern lands by the eyes of men who knew how to recognise it, I see on the African velt, a wandering, fleeting visitor. Thus it seems to bring me a greeting, like that brought by our oriole, our nightingale, and many other children of the homeland.

No one can be surprised that in these solitudes these birds, and their coming and going, are closely associated with our thoughts. It is the less to be wondered at seeing that they are all such eloquent witnesses to the miracle that these weak creatures with their feeble wings

twice each year traverse continents and fly safely over seas.

We cannot help thinking of the lark and its spring song at home, when in the wilds of Africa we hear its voice ; and it appeals so impressively to the wanderer in the wilderness, that afterwards it has the power of bringing back by its music a picture of the Nyíka in all its characteristic wildness. It is a song that has a character of its own. When I hear it, if it is in the Nyíka, I cannot help thinking of the songster's frail, weak brethren of Europe, that, following an irresistible impulse, are perhaps at this moment meeting their death on the little island of Heligoland—obedient to the same instinct that sends myriads of their kind each year towards pole or equator. For even as the northern song of the lark awakens the soft, poetic spell of smiling fields, so, too, the mysterious and still deeply veiled spell of the Nyíka can find expression in its wonderful music.

Small, invisible almost, it rises in the air. Soon it is lost to sight in the sky. Then suddenly a song that, though so often heard before, is still a marvel, comes distinctly on the ear, its notes sharply accented and emphasised as if it were *close to us*. There is a sharp, rhythmical, clapping sound, as if small laths or pieces of whalebone were being rattled together. It comes from that tree right in front of us. No mistake about it seems possible. But the eye searches in vain for the producer of the sound.

Again and again one is deceived in this way. Who

could imagine that that little bird far away over there, a hardly perceptible speck on the horizon, is producing this strange music? "Knáck! knáck! knáck!" again, and yet again, it comes to us ringing out loud and clear. Our little invisible songster does not tire of pouring out its strange misleading song. It is a kind of love-song of a species of lark, which was discovered by Fischer some fifteen years ago and bears the name of the naturalist, now long deceased; *Mirafra fischeri*, Rchw.,[1] is its scientific name. Its clapping and rattling are undoubtedly part of the charm of a journey in certain districts of the Masai-Nyíka.

Even in my tent, in the midst of the comparatively loud noise of the busy camp of my numerous caravan, I can hear the clapping, rattling voice of this lark. Some hundreds of yards away it flies up into the sky, like our own skylark, and hovers about clattering in the air, so loudly and distinctly that if I did not know its character and habits, I would have been continually looking for it close to my tent. It is very hard to quite free oneself from this illusion. One continually thinks that one hears the cry of the bird in one's immediate neighbourhood, the sound being produced much in the same way as that of the snipe.

And yet another strange voice of a lark resounds in my ears: a melancholy, plaintive, soft sound, till now unknown to me and to most others. All night long its calls and cries resound about my camp. I should never have thought that it was a lark (*Mirafra*

[1] Cf. Professor Dr. A. Reichenow, *Die Vögel Afrikas*.

intercedens Rchw.) that thus made itself heard in the night, as our woodlarks do in moonlight nights at home. It was at the cost of much careful research that the discovery was made of what bird produced this song.

And the strange voice of yet another bird is inseparable from my recollections of the wilderness of East Africa. The xerophytic flora of the far-spreading thorny mimosa thickets gives shelter to a privileged member of the bird world, which is thus guarded in safety from all danger amid their thorny boughs and branches. I refer to a peculiar bird, belonging to the group of the Musophagidæ, grey-feathered, green-beaked, long-tailed, and adorned with a crest. This strange fellow roves about restlessly—a bird about as big as a jay, misleading the traveller with his cry in the most curious way. Science calls him *Chizaerhis leucogastra*, Rüpp.; the German language has given him the name of "*Lärmvogel*" ("noisy bird").

And he has a perfect right to bear his name. There resounds somewhere near us, and in a way that completely deceives us, now the barking and snarling of a dog, now the bleating of sheep. Following the direction of the sound we look to see what produces it, and we find our bird hopping about nimbly upon the tops of the thorn-trees and acacias, appearing to have no anxiety about the thorny spikes of the branches, in which he makes his home. With a cleverness that borders on the miraculous he makes his way amongst them, protected by them against the attacks of birds or beasts of prey, and in his

conscious reliance on the security of his dwelling-place, so to say, mocking at all enemies. So deceptive are his cries that at first, and especially when I was in the neighbourhood of native settlements, I was continually looking everywhere for sheep and their shepherds.

Many other typical bird-voices live in my memory. I hear the peculiar plaintive cry of the large cormorants that are busy with their fishing by the salt lakes of the wilderness, a cry that seems most fitted for these solitudes. The mysterious chattering and chirping of the little swamp-fowl come to my ear from the shallows and the bushes along the banks of silent rivers of the primeval forest, a bird-language so strange that the natives believe the birds are conversing with the fish in the stream. I hear the cackling of the knowing Nile-geese, that seem to be always engaged in conversation; when on the wing, too, a pair of them, in their affectionate fidelity, have always some warning, some reminder of something or other to call out to each other. Where their cry resounds one hears also frequently that of the wonderful, wailing peewit; it has a plaintive and melancholy effect on the mind of the listener. Far different is the noisy outcry of its brightly coloured cousin, a denizen of the thirsty wilderness (*Stephanibyx coronatus*, Bodd.). Shrill and harsh the voice of the bird rings out, a watch-cry by day and night, and when in bright moonlight nights they fly in flock[illegible] the camp. Swarms of these remarkable birds, the police of the wilderness in feathered uniforms, flutter around the traveller as he approaches. They ruin

his attempts to stalk wild animals, and their strident screeches, to which all other animals hearken, haunt him long after, as also the call and cry of the large, yellow-eyed thick-knee, an inhabitant of the loneliest solitudes. But I cannot imagine the low shores of African lakes and the sea-coast without the cry of the widely distributed

A SHRIKE (*LANIUS CAUDATUS* Cab.) ON THE LOOK-OUT FROM THE HIGH BOUGHS OF AN ACACIA. ITS CRIES WHEN IT SEES A HUNTER ON THE MOVE OFTEN WARN THE ANIMALS HE IS STALKING.

sandpiper, which has its home in the far north. In winter its low plaintive cry is heard at every step: but even in summer the trained ear can distinguish it here and there. These individual stragglers from the north are thus to be found during all times of the year in this distant country, while the most of their kindred tribe have

successfully made their way to the Polar lands, their usual summer breeding-place.

High over my head the voice of the pretty avocet (*Recurvirostra avocetta*, L.), one of the most charming forms of the bird world known to us, transports me by magic to the distant and mournful lakes of the Masailand wilderness. What the dwarf bustards (*Otis gindiana*, Oust.) keep calling out to each other with their continually repeated "Rágga-ga-rágga" is not to be discovered. But their cry, which has kept the fancy of the natives busy since olden days, is as inseparably associated with regions on which the grass grows high, as the voices and cries of the sandfowl, the francolins, and, above all, the jarring outcries of the guinea-fowl, on the velt. All the manifold voices of doves, cuckoos, parrots, hornbills, bee-eaters, shrikes, orioles, starlings, finches, weaver-birds, sylvians, and the rest, calling, exulting, rejoicing, uttering cries of alarm or complaint, have woven themselves into my recollections of happy days and days of toil.

Thus there still rings in my ear the triple note of the yellowish green bulbul (*Pycnonotus layardi*, Gurn.), which, like our sparrow, is present everywhere, till one almost tires of it. Most curious is the friendly play which the handsomely coloured glossy starling (*Spreo superbus*, Rüpp.) carries on with a weaver-bird (*Dinemellia dinemelli*, [Hartl.] Rüpp) in flights like those of our sparrows. It comes back to me all the more vividly when I recall the notes uttered by these two birds, which, though such close friends and taking such delight in each other's

company, are so distantly related. The curious warbling of the honey-finder (*Indicator indicator*, Gm.), which often guides the man who follows it to a wild bees' nest, also easily makes a permanent impression on the ear of the traveller.

And there are many other bird-voices that delight any one who takes pleasure in sound. When silvery moonbeams streamed over the camp, the night-jars (especially *Caprimulgus fossei* [Verr.] Hartl.) buzzed and hummed forth their strange song everywhere around. No matter how remote and desolate the wilderness in which the traveller laid down his head to rest, these goat-suckers were to be heard. Their voice makes a strong impression on us even in our own country in the lonely woods, but its effect is much more striking on the far-off equatorial velt. With noiseless soft beating of its wings the bird comes gliding past us; its wings almost touch us. When it pours forth its song, its monotonous sleepy song, I could listen to it for hours. In the daytime it starts up suddenly from the ground here and there in front of you, uttering the feeblest of cries, that it is impossible to represent. In the next instant it vanishes like some huge moth, and even the sharpest eye cannot distinguish it amongst the dry branches and leaves, or clinging close to the rocky ground. The song of the night-jar is among my most vivid recollections of the bird-voices of Africa.

In the neighbourhood of water, wherever it may be, and in the thick undergrowth, wherever the African wilderness extends, you hear the call and cry of a peculiar

bird-voice. It rings out through the stillness with a deep double piping note, that impresses itself in a lasting way on the ear. It is the voice of the handsome organ-shrike (*Laniarius æthiopicus*, Gm.). These shrikes, which mate permanently, always utter this note in such quick succession, one of the pair after the other, that at first you think you are listening to only a single bird. This beautiful bird-note indicates the proximity of water, and thus it has acquired quite a special significance in these countries.

Finally there is no sound from the throat of a bird that I call to mind so plainly, or so continually, as the song of the African nightingale (*Erithacus africanus*, [Fschr.] Rchw.). I have very frequently heard this beautiful song during the months of our winter, in many districts round Kilimanjaro. When I heard it unexpectedly for the first time, I was most deeply moved by it. Ten years ago I heard it during a day's march in the wooded gullies of the great volcanic mountain, and it was most clear and full and beautiful. I never expected thus to hear this northern bird-voice in the tropics. Later on, when I was camped at a considerable altitude in the primeval forests of Kilimanjaro, I was saluted with the cries of northern migratory birds, that, wheeling round the mountain, seemed to be flying over its everlasting snowfields. It was a strange coincidence in those Christmas days, the song of the northern nightingale, and those northern birds of passage on the wing under the equatorial sun! It is worth noting that this voice of the nightingale was the only genuine northern bird-song

that I ever heard in Africa. That our nightingale also sometimes breeds there is indicated by the discovery of its nest by the late Dr. Fischer. But the problem of the extraordinary identity in character of this nightingale with its northern sister still awaits solution. Many difficult observations will have to be made in order to investigate it thoroughly.

What a contrast to this song of our northern nightingale is presented by the voices of the hyenas and jackals, the strange cry uttered by the leopard, all the sounds emitted by the antelopes, and finally the indescribably startling, harsh-sounding bellow of the crocodile!

But neither individually nor collectively can the effect of all these voices be expressed in words. They associate themselves with the forms of a flora untouched by the hand of man, and the unceasing throb of animal life. I think of them all together as a theatre of nature now flooded with sunlight, now in the mysterious darkness of night, or with glistening moonbeams playing over it. What impresses one so much is not merely these individual voices, but the way in which all the myriad voices mingle in one mighty chorus.

If this symphony of nature is to be written down, it must be by some master who will combine in one marvellous melody these musical utterances that are so mighty and impressive, so full of mystery and charm, and so often dying away in the deepest and most delicate cadences. None of these tones should be missing, no note of them all should be struck out.

I should like to set in contrast with this mighty primeval harmony of the wilderness the sounds and voices of the modern industrial world, which gradually and unwittingly we take to be something natural. He who would feel all its greatness and perfection must keep himself far away for weeks and months from the screaming whistle he hears on the railway and the howling siren of a steamship.

Then there is the insect world! Those flower-covered bushes have attracted a multitude of great droning beetles. They hasten to them in heavy flight. On the ground a host of scarabæus beetles are busy with their special work. The ceaseless sharp chirps of the cicadas sing their continual song. Through all its variations there goes on this hum and buzz of the millions and millions of the lower creation. And joined with it there ring out the thousands and thousands of songs of the birds; the powerful voices of the great mammals bellow over plain and bushland, through swamps and primeval forests, over dale and hill. The concert of the feathered songsters is suddenly silent, as, it may be, the harsh cry of the leopard resounds, or the mighty, dull, rumbling roar of the king of the desert thunders over the earth; or the trumpet-like cry of the elephant vibrates through the woods; or harsh war-cries from human lips, battle-songs of primitive men, are heard—but heedless of it all, even at these moments, day and night resound the weak voices of all the myriads of lesser creatures of the animal world. But he who penetrates into this wilderness must have receptive senses to understand the full beauty of it all.

For him this harmony exists wherever the primitive animal world lives its life.

ON THE WEST SIDE OF KILIMANJARO I FOUND A BROOK, CALLED BY THE MASAI "MOLOGH." ABOUT TEN MILES FROM THE WESTERN 'NJIRI SWAMPS IN THE DRY SEASON IT SUDDENLY DISAPPEARS AMONG THE STONES AND REACHES THE SWAMPS BY AN UNDERGROUND CHANNEL.

Glorious and grand, too, is the language of Nature when she herself raises her primeval voice, associated with no sound of life that we can perceive. Thus it is in the hours of storm by night, when on the plain, or in the primeval forest, or on the hill slopes, the thunder roars round the little camp, and the crackling lightning comes down in zig-zags. Then the rumbling thunder, the rushing downpour of the water-floods, the roar of the storm-wind, speak with an impressiveness that is beyond all description. Then in their hour of death the giants of the primeval forest, the mighty, venerable trees, suddenly themselves find a voice that strikes loudly on the ear: they groan in the embrace of the wind, and under its fury crash thundering to the ground. Then, when the earth and the rocks under our feet seem to shake, when the powers of Nature are let loose in all their might, when weak little man in his small tent, alone in the midst of all this violence, listens to the sounds, alone and abandoned like the sailor on a frail plank in the midst of a raging ocean, then it is that the wilderness sings its greatest, noblest, most wonderful song.

The traveller may yet return to the African wilderness and hear once more the voices of the smaller denizens of the wild. The chirping of cicadas will lull him to rest, or the buzzing of the mosquitoes forbid it. Their chirping and buzzing will bear witness that these waves of life roll on untroubled and uninjured by the incoming of civilisation. But the greater voices will become rarer and rarer. Soon the trumpeting of the elephant, the roar of the lion, the bellow of the hippopotamus will be heard no longer.

But to-day one can still hear all these sounds which I have described, and which our most remote ancestors listened to all day and all night in the ages when there still lived in Europe a fauna very similar to that which we find dying out in East Africa. By day and night they go forth in trees and thickets, by swamp and reed-bed. The song of birds is accompanied by the monotonous deafening chorus of the bullfrogs. Even in the traveller's tent the crickets chirp, and the night-jar buzzes and buzzes past it, and tells and whispers of the nightly life and movement of the animal world, in its monotonous mysterious song.

A jackal holds a conversation with the evening star. In the dark night the deep bass of the hyena is heard; and then it laughs aloud, in a weird, shrill, shrieking treble. This laugh, seldom uttered, but when heard making one's heart shudder, is not a thing to forget; on feverish nights it plagues one still in memory. No one need jest about it who has not himself heard it. He who has heard it understands how the Arabs take the hyenas to be wicked men living under a spell.

Now at last the lion raises his commanding voice, and one thing only is wanting to the whole nocturnal spell—the noisy trampling of timid and harassed droves of zebras and other herds of wild things. But if the ground of the velt, hardened by the burning sun, rings once more to the thundering hoof-beats of the zebras, the eye fails in the darkness, and only our ears perceive by their numberless sounds the waves of life that are surging around us; and then indeed the listener comes to full

consciousness of how rich the animal-language of the Nyíka still is. . . . Nowhere else in the world of to-day do all the voices of the wild resound more impressively, and for him who listens to this language there is no escape from that mysterious spell—the Spell of the Elelescho!

SPURRED GEESE (*PLECTROPTERUS GAMBENSIS*).

VIII

In a Primeval Forest

SCENES of marvellous beauty open out before the wanderer who follows the windings of some great river through the unknown regions of Equatorial East Africa.

The dark, turbid stream is to find its way, after a thousand twists and turns, into the Indian Ocean. Filterings from the distant glaciers of Kilimanjaro come down into the arid velt, there to form pools and rivulets that traverse in part the basin of the Djipe Lake and at last are merged in the Rufu River. As is so often the case with African rivers, the banks of the Rufu are densely wooded throughout its long course, the monotony of which is broken by a number of rapids and one big waterfall. Save in those rare spots where the formation of the soil is favourable to their growth, the woods do not extend into the velt. Trees and shrubs alike become parched

a few steps away from the sustaining river. The abundance of fish in the river is tremendous in its wilder reaches—inexhaustible, it would seem, despite the thousands of animal enemies. The river continually overflows its banks, and the resulting swamps give such endless opportunities for spawning that at times every channel is alive with fry and inconceivable multitudes of small fishes.

It is only here and there and for short stretches that the river is lost in impenetrable thickets. Marvellous are those serried ranks of trees! marvellous, too, the sylvan galleries through which more usually it shapes its way! They take the eye captive and seem to withhold some unsuspected secret, some strange riddle, behind their solid mass of succulent foliage. It is strange that these primeval trees should still survive in all their strength with all the parasitic plants and creepers that cling to them, strangling them in their embrace. You would almost say that they lived on but as a prop to support the plants and creepers in their fight for life. Convolvuli, white and violet, stoop forward over the water, and the golden yellow acacia blossoms brighten the picture.

In the more open reaches dragonflies and butterflies glisten all around us in the moist atmosphere. A grass-green tree-snake glides swiftly through the branches of a shrub close by. A Waran (*Waranus niloticus*) runs to the water with a strange sudden rustle through the parched foliage. Everywhere are myriads of insects. Wherever you look, the woods teem with life. These woods screen the river from the neighbouring velt, the uniformity of which is but seldom broken in upon by

C. G. Schillings, phot.

VIEW OF MAWENZI, THE HIGHEST PEAK BUT ONE OF KILIMANJARO, TAKEN WITH A TELEPHOTO-LENS.

C. G. Schillings, phot.

VIEW OF KILIMANJARO, TAKEN AT SUNSET.

patches of vegetation. The character of the flora has something northern about it to the unlearned eye, as is the case so often in East Africa. It is only when you come suddenly upon the Dutch palms (*Borassus æthiopicus*, Mart., or the beautiful *Hyphæne thebaica*, Mart.) that you feel once again that you are in the tropics.

The river now makes a great curve round to the right. A different kind of scene opens out to the gaze—a great stretch of open country. In the foreground the mud-banks of the stream are astir with huge crocodiles gliding into the water and moving about this way and that, like tree-trunks come suddenly to life. Now they vanish from sight, but only to take up their position in ambush, ready to snap at any breathing thing that comes unexpectedly within their reach. Doubtless they find it the more easy to sink beneath the surface of the river by reason of the great number of sometimes quite heavy stones they have swallowed, and have inside them. I have sometimes found as much as seven pounds of stones and pebbles in the stomach of a crocodile.

The deep reaches of the river are their special domain. Multitudes of birds frequent the shallows, knowing from experience that they are safe from their enemy. One of the most interesting things that have come under my observation is the way these birds keep aloof from the deep waters which the crocodiles infest. I have mentioned it elsewhere, but am tempted to allude to it once again.

Our attention is caught by the wonderful wealth of bird-life now spread out before us in every direction. Here comes a flock of the curious clatter-bills (*Ana-*

stomus lamelligerus, Tem.) in their simple but attractive plumage. They have come in quest of food. Hundreds of other marsh-birds of all kinds have settled on the outspread branches of the trees, and enable us to distinguish between their widely differing notes.

Among these old trees that overhang the river, covered with creepers and laden with fruit of quaint shape, are Kigelia, tamarinds, and acacias. In amongst the dense branches a family of Angolan guereza apes (*Colobus palliatus*, Ptrs.) and a number of long-tailed monkeys are moving to and fro. Now a flock of snowy-feathered herons (*Herodias garzetta*, L., and *Bubulcus ibis*, L.) flash past, dazzlingly white—two hundred of them, at least—alighting for a moment on the brittle branches and pausing in their search for food. Gravely moving their heads about from side to side, they impart a peculiar charm to the trees. Now another flock of herons (*Herodias alba*, L.), also dazzlingly white, but birds of a larger growth, speed past, flying for their lives. Why is it that even here, in this remote sanctuary of animal life, within which I am the first European trespasser, these beautiful birds are so timorous? Who can answer that question with any certainty? All we know is, that it has come to be their nature to scour about from place to place in perpetual flight. Perhaps in other lands they have made acquaintance with man's destructiveness. Perhaps they are endowed with keener senses than their smaller snow-white kinsfolk, which suffer us to approach so near, and which, like the curious clatter-bill (which have never yet been seen in captivity), evince no sign of shyness—

C.G. Schillings, phot.

KIBO IN THE FOREGROUND, WITH THE SADDLE-SHAPED RANGE CONNECTING IT WITH MAWENZI IN THE DISTANCE. THE AVERAGE HEIGHT OF THIS "SADDLE" IS MORE THAN 16,000 FEET.

nothing but a certain mild surprise—at the sight of man.

Now, with a noisy clattering of wings, those less comely creatures, the Hagedasch ibises, rise in front of us, filling the air with their extraordinary cry: "Heiha! Ha heiha!"

Now we have a strange spectacle before our eyes—a number of wild geese, perched upon the trees. The great, heavy birds make several false starts before they make up their minds to escape to safety. They present a beautiful sight as they make off on their powerful wings. They are rightly styled "spurred geese," by reason of the sharp spurs they have on their wings. Hammerheads (*Scopus umbretta*, Gm.) move about in all directions. A colony of darters now comes into sight, and monopolises my attention. A few of their flat-shaped nests are visible among the pendent branches of some huge acacias, rising from an island in mid-stream. While several of the long-necked fishing-birds seek safety in flight, others—clearly the females—remain seated awhile on the eggs in their nests, but at last, with a sudden dart, take also to their wings and disappear. Beneath the nesting-places of these birds I found great hidden shaded cavities, the resorts for ages past of hippopotami, which find a safe and comfortable haven in these small islands.

The dark forms of these fishing-birds present a strange appearance in full flight. They speed past you swiftly, looking more like survivals from some earlier age than like birds of our own day. There is a suggestion of flying lizards about them. Here they come, describing a great

curve along the river's course, at a fair height. They are returning to their nests, and as they draw near I get a better chance of observing the varying phases of their flight.

But look where I may, I see all around me a wealth of tropical bird-life. Snow-white herons balance themselves on the topmost branches of the acacias. Barely visible against the deep-blue sky, a brood-colony of wood ibis pelicans (*Tantalus ibis*, L.) fly hither and thither, seeking food for their young. Other species of herons, notably the black-headed heron, so like our own common heron (*Ardea melanocephala*, Vig., Childr.), and further away a great flock of cow-herons (*Bubulcus ibis*, L.), brooding on the acacias upon the island, attract my attention. Egyptian Kingfishers (*Ceryle rudis*, L.) dart down to the water's edge, and return holding tiny fishes in their beaks to their perch above.

The numbers and varieties of birds are in truth almost bewildering to the spectator. Here is a marabou which has had its midday drink and is keeping company for the moment with a pair of fine-looking saddled storks (*Ephippiorhynchus senegalensis*, Shaw); there great regiments of crested cranes; single specimens of giant heron (*Ardea goliath*, Cretzschm.) keep on the look-out for fish in a quiet creek; on the sandbanks, and in among the thickets alongside, a tern (*Œdicnemus vermiculatus*, Cab.) is enjoying a sense of security. Near it are gobbling Egyptian geese and small plovers. A great number of cormorants now fly past, some of them settling on the branches of a tree which has fallen into the water. They are followed by Tree-geese (*Dendrocygna viduata*, L.),

C. G. Schillings, phot.

RIVER-BED VEGETATION ON THE VELT.

some plovers and night-herons, numerous sea-swallows as well as seagulls; snipe (*Gallinago media*, Frisch.), and the strange painted snipe (*Rostratula bengalensis*, L.), the *Actophylus africanus*, and marsh-fowl (*Ortygometra pusilla obscura*, Neum.), spurred lapwing (*Hoplopterus speciosus*, Lcht.), and many other species. Now there rings out, distinguishable from all the others, the clear cry—to me already so familiar and so dear—of the screeching sea-eagle, that most typical frequenter of these riverside regions of Africa and so well meriting its name. A chorus of voices, a very Babel of sound, breaks continually upon the ear, for the varieties of small birds are also well represented in this region. The most beautiful of all are the cries of the organ-shrike and of the sea-eagle. The veritable concerts of song, however, that you hear from time to time are beyond the powers of description, and can only be cherished in the memory.

There is a glamour about the whole life of the African wonderland that recalls the forgotten fairy tales of childhood's days, a sense of stillness and loveliness. Every curve of the stream tells of secrets to be unearthed and reveals unsuspected beauties, in the forms and shapes of the Phœnix palms and all the varieties of vegetation; in the indescribable tangle of the creepers; in the ever-changing effects of light and shade; finally in the sudden glimpses into the life of the animals that here make their home. You see the deep, hollowed-out passages down to the river that tell of the coming and going of the hippopotamus and rhinoceros, made use of also by the crocodiles. It is with a shock of surprise that you see a specimen of our

own great red deer come hither at midday to quench his thirst—a splendid figure, considerably bigger and stronger than he is to be seen elsewhere. A herd of wallowing wart-hogs or river-swine will sometimes startle you into hasty retreat before you realise what they are. The tree-tops rock under the weight and motion of apes unceasingly scurrying from branch to branch. Every now and again the eye is caught by the sight of groups of crocodiles, now basking contentedly in the sun, now betaking themselves again to the water in that stealthy, sinister, gliding way of theirs.

Not so long ago the African traveller found such scenes as these along the banks of every river. Nowadays, too many have been shorn of all these marvels. Take, for instance, the old descriptions of the Orange River and of the animal life met with along its course. No trace of it now remains.

I should like to give a picture of the animal life still extant along the banks of the Pangani. The time is inevitably approaching when that, too, will be a thing of the past, for it is not to be supposed that advancing civilisation will prove less destructive here.

So recently as the year 1896 the course of the river was for the most part unknown. When I followed it for the second time in 1897, and when in subsequent years I explored both its banks for great distances, people were still so much in the dark about it that several expeditions were sent out to discover whether it was navigable.

That it was not navigable I myself had long known. Its numerous rapids are impracticable for boats even in the

C. G. Schillings, phot.

A FISHERMAN'S BAG! THREE CROCODILES SECURED BY THE AUTHOR IN THE WAY DESCRIBED IN "WITH FLASHLIGHT AND RIFLE."

rainy season. In the dry season they present insuperable obstacles to navigation of any kind.

The basin of the Djipe Lake in the upper reaches of the Pangani, and the Pangani swamps below its lower reaches, formed a kind of natural preserve for every variety of the marvellous fauna of East Africa. It was a veritable El Dorado for the European sportsman, but one attended by all kinds of perils and difficulties. The explorer found manifold compensation, however, for everything in the unexampled opportunities afforded him for the study of wild life in the midst of these stifling marshes and lagoons. The experience of listening night after night to the myriad voices of the wilderness is beyond description.

Hippopotami were extraordinarily numerous at one time in the comparatively small basin of the Djipe Lake. In all my long sojourn by the banks of the Pangani I only killed two, and I never again went after any. There were such numbers, however, round Djipe Lake ten years ago that you often saw dozens of them together at one time. I fear that by now they have been nearly exterminated.

Here, as everywhere else, the natives have levied but a small tribute upon the numbers of the wild animals, a tribute in keeping with the nature of their primitive weapons. Elephants used regularly to make their way down to the water-side from the Kilimanjaro woods. My old friend Nguruman, the Ndorobo chieftain, used to lie in wait for them, with his followers, concealed in the dense woods along the river. But the time came when the elephants ceased to make their appearance. The old hunter, whose body bore signs of many an encounter

with lions as well as elephants, and who used often to hold forth to me beside camp fires on the subject of these adventures, could not make out why his eagerly coveted quarry had become so scarce. Every other species of "big game" was well represented, however, and according to the time of the year I enjoyed ever fresh opportunities for observation. Generally speaking, it would be a case of watching one aspect of wild life one day and another all the next, but now and again my eyes and ears would be surfeited and bewildered by its manifestations. The sketch-plans on which I used to record my day's doings and seeings serve now to recall to me all the multiform experiences that fell to my lot. What a pity it is that the old explorers of South Africa have left no such memoranda behind them for our benefit! They would enable us to form a better idea of things than we can derive from any kind of pictures or descriptions.

I shall try now to give some notion of all the different sights I would sometimes come upon in a single day. It would often happen that, as I was making my way down the Pangani in my light folding craft, or else was setting out for the velt which generally lay beyond its girdle of brushwood, showers of rain would have drawn herds of elephants down from the mountains.[1] Even when I did not actually come within sight of them, it was always an intense enjoyment

[1] Male Emperor-moths (*Saturnia pyri*) hasten from great distances, even against the wind, to a female of the species emerging from the chrysalis state in captivity. Elephants, the author believes, can scent a fall of rain at a distance of many miles.

C. G. Schillings, phot.

CLATTER-BILLS SETTLING UPON THE BARE BRANCHES OF RIVERSIDE TREES.

C G. Schillings, phot.

CLATTER-BILLS (*ANASTOMUS LAMELLIGERUS*, Tem.).

to me to trace the immense footsteps of these nocturnal visitors. Perhaps the cunning animals would have already put several miles between my camp and their momentary stopping place. But their tracks afforded me always most interesting clues to their habits, all the more valuable by reason of the rare chances one has of observing them in daylight, when they almost always hide away in impenetrable thickets. What excitement there is in the stifled cry "Tembo!" In a moment your own eye perceives the unmistakable traces of the giant's progress. The next thing to do is to examine into the tracks and ascertain as far as possible the number, age and sex of the animals. Then you follow them up, though generally, as I have said, in vain.

The hunter, however, who without real hope of overtaking the elephants themselves yet persists in following up their tracks just because they have so much to tell him, will be all the readier to turn aside presently, enticed in another direction by the scarcely less notable traces of a herd of buffaloes. Follow these now and you will soon discover that they too have found safety, having made their way into an impenetrable morass. To make sure of this you must perhaps clamber up a thorny old mimosa tree, all alive with ants—not a very comfortable method of getting a bird's-eye view. Numbers of snow-white ox-peckers flying about over one particular point in the great wilderness of reeds and rushes betray the spot in which the buffaloes have taken refuge.

The great green expanse stretches out before you monotonously, and even in the bright sunlight you can see

no other sign of the animal life of various kinds concealed beneath the sea of rushes waving gently in the breeze. Myriads of insects, especially mosquitoes and ixodides, attack the invaders; the animals are few that do not fight shy of these morasses. They are the province of the elephants, which here enjoy complete security; of the hippopotami, whose mighty voice often resounds over them by day as by night; of the buffaloes, which wallow in the mud and pools of water to escape from their enemies the gadflies; and finally of the waterbuck, which are also able to make their way through even the deeper regions of the swamp. Wart-hogs also—the African equivalent of our own wild boars—contrive to penetrate into these regions, so inhospitable to mankind. We shall find no other representatives, however, of the big game of Africa. It is only in Central Africa and in the west that certain species of antelope frequent the swamps. In the daytime the elephant and the buffalo are seldom actually to be seen in them, nor does one often catch sight of the hippopotami, though they are so numerous and their voices are to be heard. As we grope through the borders of the swamp, curlew (*Glareola fusca*, L.) flying hither and thither all around us, we are startled ever and anon by a sudden rush of bush and reed buck plunging out from their resting-places and speeding away from us for their life. Even when quite small antelopes are thus started up by the sound of our advance, so violent is their flight that for the moment we imagine that we have to deal with some huge and perhaps dangerous beast.

In those spots where large pools, adorned with wonderful

C. G. Schillings, phot.

A MARSHLAND VIEW. AN OSPREY IN AMONG THE REEDS—THE BIRD FOR WHOSE PROTECTION QUEEN ALEXANDRA OF ENGLAND HAS LATELY PLEADED.

C. G. Schillings, phot.

SNOW-WHITE HERONS MADE THEIR NESTS IN THE ACACIAS NEAR MY CAMP AND SHOWED NO MARKED TIMIDITY.

A SINGLE PAIR OF CRESTED CRANES WERE OFTEN TO BE SEEN NEAR MY CAMP.

A SNAKE-VULTURE. I SUCCEEDED TWICE ONLY IN SECURING A PHOTOGRAPH OF THIS BIRD.

C. G. Schillings, phot.

PREPARING TO SKIN A HIPPOPOTAMUS. THE PRESERVATION OF THE HIDE OF THIS SPECIMEN PROVED UNSUCCESSFUL. IT IS ALMOST IMPOSSIBLE TO PRESERVE HIPPOPOTAMUS-HIDES WITHOUT HUGE QUANTITIES OF ALUM AND SALT, BOTH VERY HARD TO GET IN THE INTERIOR OF AFRICA. THE SKIN OF THE HEAD IS THINNER AND MORE MANAGEABLE THAN THAT OF THE REST OF THE BODY.

C. G. Schillings, phot.

HIPPOPOTAMI, POPPING THEIR HEADS OR EARS AND SNOUTS UP ABOVE THE SURFACE OF THE WATER.

water-lilies, give a kind of symmetry to the wilderness, we come upon such a wealth of bird-life as enables us to form some notion of what this may have been in Europe long ago under similar conditions. The splendid great white heron (*Herodias alba*, L., and *garzetta*, L.) and great flocks of the active little cow-herons (*Bubulcus ibis*, L.) make their appearance in company with sacred ibises and form a splendid picture in the landscape. Some species of those birds with their snow-white feathers stand out picturesquely against the rich green vegetation of the swamp. When, startled by our approach, these birds take to flight, and the whole air is filled by them and by the curlews (*Glareola fusca*, L.) that have hovered over us, keeping up continually their soft call, when in every direction we see all the swarms of other birds—sea-swallows (*Gelochelidon nilotica*, Hasselg.), lapwings, plovers (*Charadriidæ*), Egyptian geese, herons, pelicans, crested cranes and storks—the effect upon our eyes and ears is almost overpowering.

How mortal lives are intertwined and interwoven! The ox-peckers swarm round the buffaloes and protect them from their pests, the ticks and other parasites. The small species of marsh-fowl rely upon the warning cry of the Egyptian geese or on the sharpness of the herons, ever on the alert and signalling always the lightning-like approach of their enemy the falcons (*Falco biarmicus*, Tem., and *F. minor*, Bp.). All alike have sense enough to steer clear of the crocodiles, which have to look to fish chiefly for their nourishment, like almost all the frequenters of these marshy regions.

The quantities of fish I have found in every pool in these swamps defy description—I am anxious to insist upon this point—and this although almost all the countless birds depend on them chiefly for their food. Busy beaks and bills ravage every pool and the whole surface of the lagoon-like swamp for young fish and fry. The herons and darters (*Assingha rufa*, Lacèp. Daud.) manage even to do some successful fishing in the deeper waters of the river. *And yet, in spite of all these fish-eaters, the river harbours almost a superabundance of fish.*[1]

Wandering along by the river, we take in all these impressions. For experiences of quite another kind, we have only to make for the neighbouring velt, now arid again and barren, and thence to ascend the steep ridges leading up to the tableland of Nyíka.

Behind us we leave the marshy region of the river and the morass of reeds. Before us rises Nyíka, crudely yellow, and the laterite earth of the velt glowing red under the blazing sun. The contrast is strong between the watery wilderness from which we have emerged and these higher ranges of the velt with their strange vegetation. Here we shall find many species of animals that we should look for in vain down there below, animals that live differently and on scanty food up here, even in the dry season. The buffaloes also know where to go for fresh young grass even when they are in the marshes, and they reject the ripened green grass. The dwellers on the velt are only to be found amidst the lush vegetation of the

[1] The author would like to bring this fact home to all destroyers of herons, kingfishers, and diving-birds.

C. G. Schillings, phot.

HEAD OF A HIPPOPOTAMUS (*HIPPOPOTAMUS AFR. ABYSSINICUS.* Less.) WHICH I ENCOUNTERED ON DRY LAND AND WHICH NEARLY "DID" FOR ME.

C. G. Schillings, phot.

MY OLD FRIEND "NGURUMAN," A WANDOROBO CHIEF. HIS BODY IS SEARED BY MANY SCARS THAT TELL OF ENCOUNTERS WITH ELEPHANTS AND LIONS.

valley at night time, when they make their way down to the river-side to drink.[1] It is hard to realise, but they find all the food they need on the high velt. When you examine the stomachs of wild animals that you have killed, you note with wonder the amount of fresh grass and nourishing shrubs they have found to eat in what seem the barrenest districts. The natives of these parts show the same kind of resourcefulness. The Masai, for instance, succeeds most wonderfully in providing for the needs of his herds in regions which the European would call a desert. I doubt whether the European could ever acquire this gift. Out here on the velt we shall catch sight of small herds of waterbuck, never to be seen in the marshes. We shall see at midday, under the bare-looking trees, herds of Grant's gazelles too, and the oryx antelope. Herds of gnus, going through with the strangest antics as they make off in flight, are another feature in the picture, while the fresh tracks of giraffes, eland, and ostriches tell of the presence of all these. Wart-hogs, a herd of zebras in the distance—like a splash of black—two ostrich hens, and a multitude of small game and birds of all descriptions add to the variety. But what delights the ornithologist's eye more than anything is the charming sight of a golden yellow bird, now mating. Up it flies into the sky from the tree-top, soon to come down again with wings and tail outstretched, recalling our own singing birds. You would almost fancy it was a canary.

[1] The Masai distinguish the kinds of grass which their cattle eat and reject. Many kinds of grass with pungent grains, such as *Andropogon contortus*, L., are rejected entirely. Yet the tough bow-string hemp is to the taste of many wild animals—the small kudu, for instance.

Only in this one region of the velt have I come upon this exquisite bird (*Tmetothylacus tenellus*, Cal.), nowhere else

Thus would I spend day after day, getting to know almost all the wild denizens of East Africa, either by seeing them in the flesh or by studying their tracks and traces, cherishing more and more the wish to be able to achieve some record of all these beautiful phases of wild life. I repeat: as a rule you will carry away with you but one or another memory from your too brief day's wandering, but there come days when a succession of marvellous pictures seem to be unrolled before your gaze, as in an endless panorama. It is the experience of one such day that I have tried here to place on record. Professor Moebius is right in what he says: "Æsthetic views of animals are based not upon knowledge of the physiological causes of their forms, colouring, and methods of motion, but upon the impression made upon the observer by their various features and outward characteristics as parts of a harmonious whole. The more the parts combine to effect this unity and harmony, the more beautiful the animal seems to us." Similarly, a landscape seems to me most impressive and harmonious when it retains all its original elements. No section of its flora or fauna can be removed without disturbing the harmony of the whole.

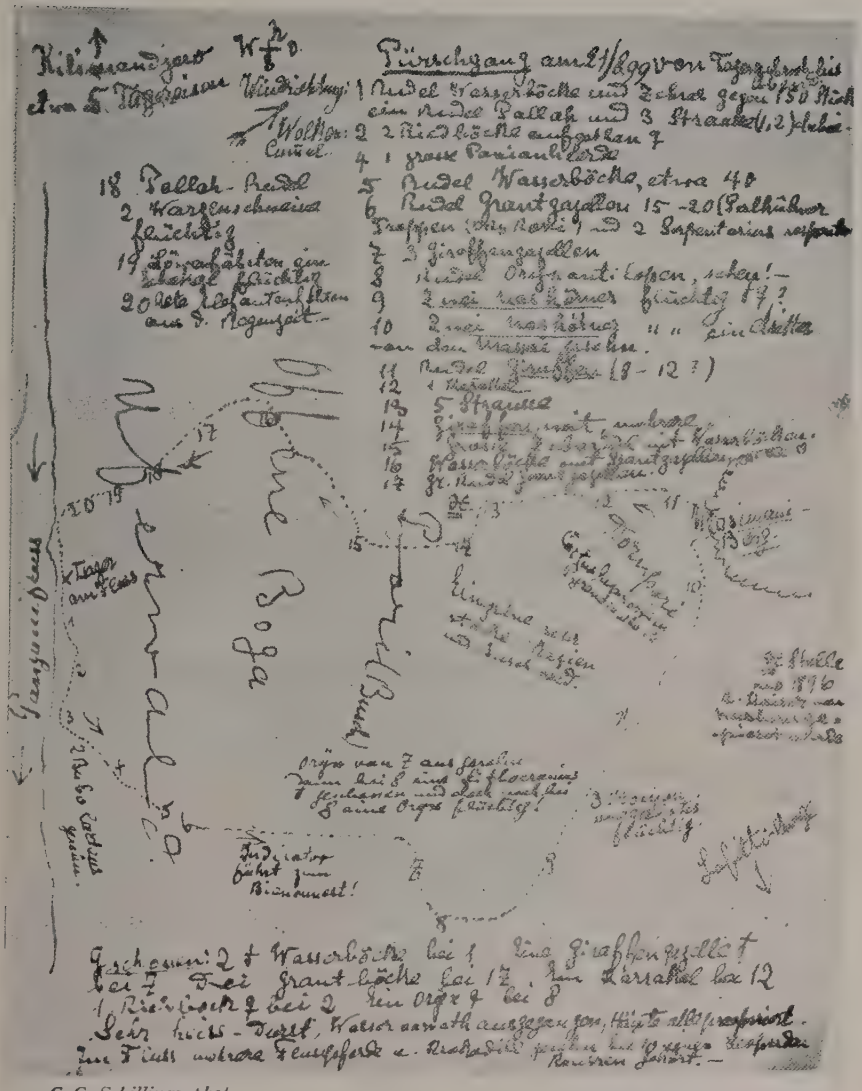
Within a few years, if this be not actually the case already, all that I have here described so fully will no longer be in existence along the banks of the Pangani. When I myself first saw these things, often my thoughts went back to those distant ages when in the lands now known as Germany the same description of wild life was

C. G. Schillings, phot.

EGYPTIAN GEESE.

C. G. Schultings, *phot.*

A WOUNDED BUFFALO.

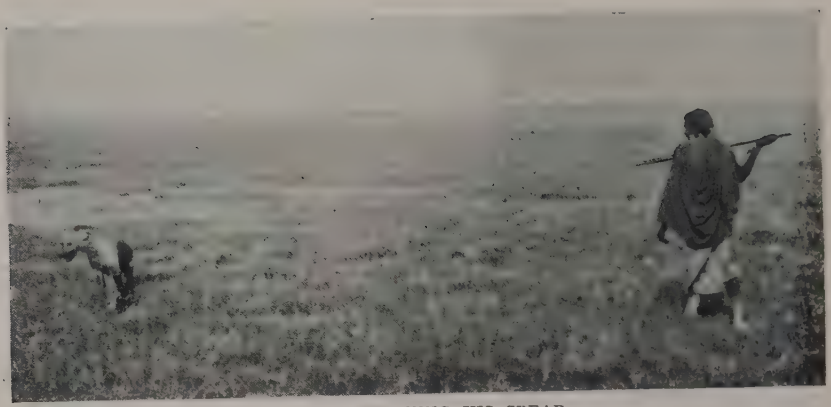


C. G. Schillings, phot.

FACSIMILE REPRODUCTION OF ONE OF MY HUNTING RECORD-CARDS, ENUMERATING ALL THE DIFFERENT ANIMALS I SIGHTED ONE DAY (AUGUST 21, 1898) IN THE COURSE OF AN EXPEDITION IN THE VICINITY OF THE MASIMANI HILLS, HALF-WAY UP THE PANGANI RIVER. THE DOTTED LINE SHOWS MY ROUTE AND THE NUMBERS INDICATE THE SPOTS AT WHICH I CAME UPON THE VARIOUS SPECIES OF GAME. AT ANOTHER TIME OF THE YEAR THIS DISTRICT WOULD BE ENTIRELY DESTITUTE OF WILD LIFE.

extant in the river valleys, when hippopotami made their home in the Rhine and Main, and elephants and rhinoceroses still flourished. . . . What I saw there before me in the flesh I learnt to see with my mind's eye in the long-forgotten past. It is the duty of any one whose good fortune it has been to witness such scenes of charm and loveliness to endeavour to leave some record of them as best he may, and by whatever means he has at his command.

A SEA-GULL.



A MASAI THROWING HIS SPEAR.

IX

After Elephants with Wandorobo

"BIG game hunting is a fine education!" With this opinion of Mr. H. A. Bryden I am in entire agreement, but I cannot assent to the dictum so often cited of some of the most experienced African hunters, to the effect that Equatorial East Africa offers the sportsman no adequate compensation for all the difficulties and dangers there to be faced.

I cannot subscribe to this view, because to my mind these very difficulties and dangers impart to the sport of this region a fascination scarcely to be equalled in any other part of the world. It is only in tropical Africa that you will find the last splendid specimens of an order of wild creation surviving from other eras of the earth's history. It is not to be denied that you must pay a high price for the joy of hunting them. That goes without

C. G. Schillings, phot.

A POWERFUL OLD HIPPOPOTAMUS ON HIS WAY TO HIS HAUNT IN THE SWAMP AT DAYBREAK.
ONE OF MY BEST PHOTOGRAPHS.

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saying in a country where your every requisite, great and small, has to be carried on men's shoulders—no other form of transport being available—from the moment you set foot within the wilderness. I am not now talking of quite short expeditions, but of the bigger enterprises which take the traveller into the interior for a period of months. I hold that this breaking away from all the resources of civilised life should be one of the sportsman's chief incentives, and one of his chief enjoyments. I can, of course, quite understand experienced hunters taking another view. Many have had such serious encounters with the big game they have shot, and above all such unfortunate experiences of African climates, that they may well have had enough of such drawbacks.

Their assertions, in any case, tend to make it clear that sport in this East African wilderness is no child's play. In reality, all depends upon the character and equipment of the man who goes in for it. The apparently difficult game of tennis presents no difficulties to the expert tennis-player. With an inferior player it is otherwise. So it is in regard to hunting in the tropics. It is obvious that experience in sport here at home is of the greatest possible use out there—is, in fact, absolutely essential to one's success. Only those should attempt it who are prepared to do everything and cope with all obstacles for themselves, who do not need to rely on others, and whose nerves are proof against the extraordinary excitements and strains which out there are your daily experience.

I myself am conscious of a steadily increasing distaste for face-to-face encounters with rhinoceroses, and with

elephants still more. There are indeed other denizens of the East African jungle whose defensive and offensive capabilities it would be no less a mistake to under estimate. The most experienced and most authoritative Anglo-Saxon sportsmen are, in fact, agreed that, whether it be a question of going after lions or leopards or African buffaloes, sooner or later the luck goes against the hunter. Of recent years a large number of good shots have lost their lives in Africa. If one of these animals once gets at you, you are as good as dead. To be chased by an African elephant is as exciting a sensation as a man could wish for. The fierceness of his on-rush passes description. He makes for you suddenly, unexpectedly. The overpowering proportions of the enraged beast—the grotesque aspect of his immense flapping ears, which make his huge head look more formidable than ever—the incredible pace at which he thunders along—all combine with his shrill trumpeting to produce an effect upon the mind of the hunter, now turned quarry, which he will never shake himself rid of as long as life lasts. When—as happened once to me—it is a case not of one single elephant, but of an entire herd giving chase in the open plain (as described in *With Flashlight and Rifle*), the reader will have no difficulty in understanding that even now I sometimes live the whole situation over again in my dreams and that I have more than once awoke from them in a frenzy of terror.

Of course, a man becomes hardened in regard to hunting accidents in course of time, especially if all his adventures have had fortunate issues. When, however, a man has repeatedly escaped destruction by a hair's-breadth only, and

ORYX ANTELOPE BULL, NOT YET AWARE OF MY APPROACH.

A HERD OF ORYX ANTELOPES (*ORIX CALLOTIS*, Thos.), CALLED BY THE COAST-FOLK "CHIROA."

WATERBUCK. THEY SOMETIMES LOOK QUITE BLACK, AS THIS PHOTOGRAPH SUGGESTS. IT DEPENDS UPON THE LIGHT.

HEAD OF A BULL WATERBUCK (*COBUS ELLIPSIPRYMNUS*, Ogilb.).

when incidents of this kind have been heaped up one on another within a brief space of time, the effects upon the nervous system become so great that even with the utmost self-mastery a man ceases to be able to bear them. As I have already said, the total number of casualties in the ranks of African sportsmen is not inconsiderable.

In Germany, of course, we have time-honoured sports of a dangerous nature too, but these are exceptions—for instance, killing the wild boar with a spear, and mountain-climbing and stalking.

In order to understand fully the mental condition of the sportsman in dangerous circumstances such as I have described, it is necessary to realise the way in which he is affected by his loneliness, his complete severance from the rest of mankind. There is all the difference in the world between the situation of a number of men taking up a post of danger side by side, and that of the man who stands by himself, either at the call of duty or impelled by a sense of daring. He has to struggle with thoughts and fears against which the others are sustained by mutual example and encouragement.

But, as I have said, the great fascination of sport in the tropics lies precisely in the dangers attached. Therein, too, lies the source of that pluck and vigour which the sport-hardened Boers displayed in their struggles with the English. The perils they had faced in their pursuit of big game had made brave men of them.

Now let us set out in company with the most expert hunters of the velt on an expedition of a rather special

kind—the most dangerous you can go in for in this part of the world—an elephant-hunt. In prehistoric days the mammoth was hunted with bow and arrow in almost the same fashion as the elephant is to-day by certain tribes of natives. Taking part in one of their expeditions, one feels it easy to go back in imagination to the early eras of mankind. This feeling imparts a peculiar fascination to the experience.

After a good deal of trouble I had got into friendly relations with some of these nomadic hunters. It was a difficult matter, because they fight shy of Europeans and of the natives from the coast, such as my bearers and followers generally. I knew, moreover, that our friendship might be of short duration, for these distrustful children of the velt might disappear at any moment, leaving not a trace behind them. However, I had at least succeeded, by promises of rich rewards in the shape of iron and brass wire, in winning their goodwill. After many days of negotiation they told me that elephants might very likely be met with shortly in a certain distant part of the velt. The region in question was impracticable for a large caravan. Water is very scarce there, rock pools affording only enough for a few men, and only for a short time. At this period of the year the animals had either to make incredibly long journeys to their drinking-places, or else content themselves with the fresh succulent grass sprouting up after the rains, and with the moisture in the young leaves of the trees and bushes.

I set out one day in the early morning for this locality with a few of my men in company with the Wandorobo.

C. G. Schillings, phot.

MY WANDOROBO GUIDES ON THE MARCH, WITH ALL THEIR "HOUSEHOLD FURNITURE" ON THEIR BACKS!

C. G. Schillings, phot.

A PARTY OF WANDOROBO HUNTERS COMING TO MY CAMP. I GOT SEVERAL OF THEM TO ACT FOR ME AS GUIDES.

After a long and fatiguing march in the heat of the sun, we encamp in the evening at one of the watering-places. To-day, to my surprise, there is quite a large supply of water, owing to rain last night. The elephants, with their unfailing instinct, have discovered the precious liquid. They have not merely drunk in the pool, but have also enjoyed a bath; their tracks and the colour and condition of the water show that clearly. Therefore we do not pitch our camp near the pool, but out in the velt at some distance away, so as not to interfere with the elephants in case they should be moved to return to the water.

But the wily beasts do not come a second time, and we are obliged to await morning to follow their tracks in the hope of luck. The Wandorobo on ahead, I and two of my men following, make up the small caravan, while some of my other followers remain behind at the watering-place in a rough camp. I have provided myself with all essentials for two or three days, including a supply of water contained in double-lined water-tight sacks. For hour after hour we follow the tracks clearly defined upon the still damp surface of the velt. Presently they lead us through endless stretches of shrubs and acacia bushes and bow-string hemp, then through the dried-up beds of rain-pools now sprouting here and there with luxuriant vegetation. Then again we come to stretches of scorched grass, featureless save for the footsteps of the elephants. As we advance I am enabled to note how the animals feed themselves in this desert-like region, from which they never wander any great distance. Here, stamping with their mighty feet, they have smashed some young tree-trunks

and shorn them of their twigs and branches; and there, with their trunks and tusks, they have torn the bark off larger trees in long strips or wider slices and consumed them. I observe, too, that they have torn the long sword-shaped hemp-stalks out of the ground, and after chewing them have dropped the fibres gleaming white where they lie in the sun. The sap in this plant is clearly food as well as drink to them. I see, too, that at certain points the elephants have gathered together for a while under an acacia tree, and have broken and devoured all its lower branches and twigs. At other places it is clear that they have made a longer halt, from the way in which the vegetation all around has been reduced to nothing. We go on and on, the mighty footsteps keeping us absorbed and excited. We know that the chances are all against our overtaking the elephants, but the pleasures of the chase are enough to keep up our zest. At any moment, perhaps, we may come up with our gigantic fugitives. Perhaps!

How different is the elephant's case in Africa from what it is in India and Ceylon! In India it is almost a sacred animal; in Ceylon it is carefully guarded, and there is no uncertainty as to the way in which it will be killed. Here in Africa, however, its lot is to be the most sought-after big game on the face of the earth; but the hunter has to remember that he may be "hoist with his own petard," for the elephant is ready for the fray and knows what awaits him. With these thoughts in my mind and the way clearer at every step, the Wandorobo move on and on unceasingly in front.

It is astonishing what a small supply of arms and

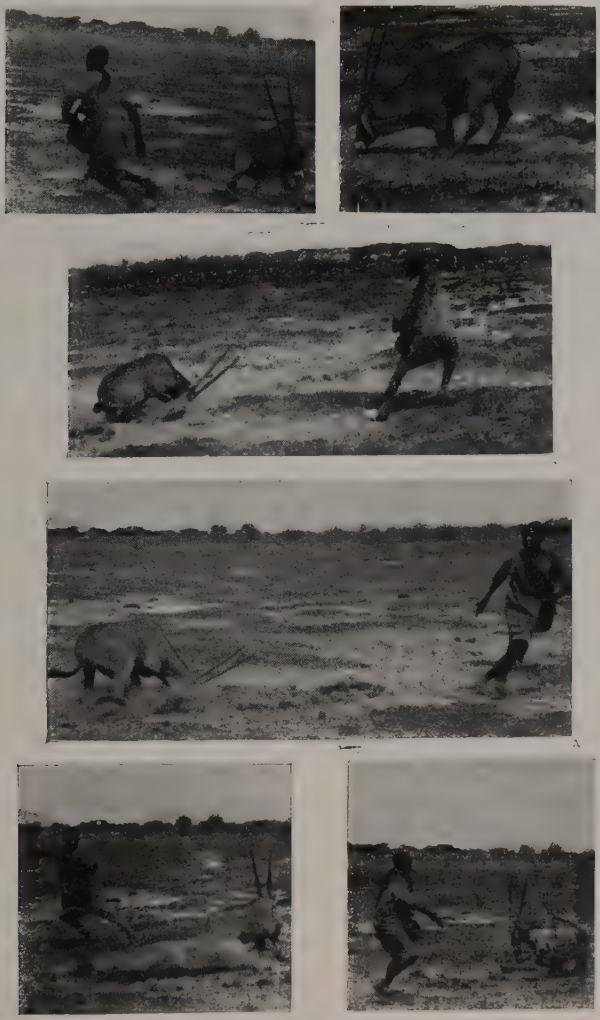
C. G. Schillings, phot.

A FEAST OF HONEY. A HONEY-FINDER HAD LED US TO A HIVE, AND HERE MY MEN MAY BE SEEN REJOICING IN THE RESULTS.

C. G. Schillings, phot

ACACIA TREE DENUDED BY ELEPHANTS.

utensils these sons of the velt take with them when starting out for journeys over Nyíka that may take weeks



AN ORYX ANTELOPE'S METHODS OF DEFENCE.

or months. Round their shoulders they carry a soft dressed skin, and, hung obliquely, a strap to which a

few implements are attached, as well as a leathern pouch containing odds and ends. Their bow they hold in one hand, while their quivers, filled with poisoned arrows, are also fastened to their shoulders by a strap. In addition they carry a sword in a primitive kind of scabbard. Thus equipped they are ready to cope with all the dangers and

A DWARF KUDU (*STREPSICEROS IMBERBIS*, Blyth). I HAVE NEVER YET SUCCEEDED IN PHOTOGRAPHING THIS ANIMAL ALIVE AND IN FREEDOM. SO FAR I HAVE BEEN ABLE TO PHOTOGRAPH ONLY SPECIMENS WHICH I HAVE SHOT.

discomforts of the velt, and succeed somehow in coming out of them victorious.

How thoroughly the velt is known to them—every corner of it! To live on the velt for any time you must be adapted by nature to its conditions. We Europeans should find it as hard to become acclimatised to it as the

ZEBRAS.

C. C. Schillings, phot.

GIRAFFE STUDIES (*GIRAFFA SCHILLINGSI*, Mtsch.) SECURED BY TELEPHOTO-LENS.

ZEBRAS (*EQUUS BOHMI*) OUT ON THE OPEN VELT.

C. G. Schillings, phot.

MY MASAI DONKEYS ARRIVING IN CAMP, ESCORTED BY ARMED MEN. BEARERS ADVANCING TO MEET THEM AND TO UNBURDEN THEM OF THEIR LOADS.

Wandorobo would to the conditions of civilised life in Europe. The one thing they are like us in being unable to forego is water—and even that they can do without for longer than we can. The most important factor in their life as hunters is their knowledge where to get water at the different periods of the year. Their intimate acquaintance with the book of the velt is something beyond our faculty for reading print. Our experiences in our recent campaigns in South-West Africa have served to bring home the wonderful way in which the natives decipher and interpret the minutest indications to be found in the ground of the velt and know how to shape their course in accordance with them.

This had already been brought home to me in the regions through which I had travelled. You must have had the experience yourself to realise the degree to which civilised man has unlearnt the use of his eyes and ears. Whether it be a question of finding one's bearings or deciding in which direction to go, or of sizing up the elephant-herds from their tracks, or of distinguishing the tracks of one kind of antelope from those of another, or of detecting some faint trace of blood telling us that some animal we are after has been wounded, or of knowing where and when we shall come to some water, or of discovering a bee's nest with honey in it—in all such matters the native is as clever as we are stupid. We may make some progress in this kind of knowledge and capability, but we shall always be a bad second to the native-born hunter of the velt.

With such men to act as your guides you get to feel

that traversing Nyika is as safe as mountain-climbing under the guidance of skilled mountaineers. You get to feel that you cannot lose your way or get into difficulties about water. One reflection, however, should never be quite absent from your mind—that at any moment these guides of yours may abandon you. That misfortune has never happened to me, and it is not likely to happen when the natives are properly handled. Moreover, your friendship with them can sometimes be strengthened by the establishment of bonds of brotherhood. A time-honoured practice of this kind, held sacred by the natives, can be of the greatest benefit. I am strongly in favour of the observance of these praiseworthy native customs, and have always been most ready to go through with the ceremonies involved.

I endeavour to win the goodwill of my guides by keeping to the pace they set—an easy matter for me. In every other way also I take pains to fall in with the ways and habits of the Wandorobo, so as to attenuate that feeling of antagonism which my uncivilised friends necessarily harbour towards the European. I owe it to this, perhaps, that they did their utmost to find the elephant-tracks for me.

For hour after hour we continue our march, in and out, over velt and brushwood, coming every few hours to a watering-place, and meeting in the hollow of one valley an exceptionally large herd of oryx antelopes. Under cover of the brushwood, and favoured by the wind, I succeed in getting quite near this herd and thus in studying their movements close at hand.

C. G. Schillings, phot.

PEARL-HENS ON AN ACACIA TREE.

C. G. Schillings, phot.

A PAIR OF GRANT'S GAZELLES TAKING TO FLIGHT.

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In the bush, not far from these oryx antelopes, I come unexpectedly on a small herd of beautiful dwarf kudus. They take to flight, but reappear for a moment in a glade. This kind of sudden glimpse of these timid, pretty creatures is a real delight to one. Their great anxious eyes gaze inquiringly at the intruder, while their large ears stand forward in a way that gives a most curious aspect to their shapely heads. The colouring of their bodies accords in a most remarkable degree with their environment, and this accentuates the individuality of their heads, seen thus by the hunter. Off they scamper again now, in a series of extraordinarily long and high jumps, gathering speed as they go, and unexpectedly darting now in one direction, now in another. It is very exciting work tracking the fugitive kudu, and when it is a question of a single specimen you may very well mark it down in the end; but according to my own experience it is next to impossible to follow up a herd, for one animal after another breaks away from it, seeking safety on its own account.

Now we come again to an open grassy stretch of velt. With a sudden clatter of hoofs a herd of some thirty zebras some hundred paces off take to flight and escape unhurt by us into the security of a distant thicket. The older animals and the leaders of the herd keep looking backwards anxiously with outstretched necks. Even in the thicket their bright colouring makes them discernible at this hour of the day. But our attention is distracted now elsewhere. Far away on the horizon appear the unique outlines of a herd of giraffes. The

timorous animals have noted our approach and are already making away—stopping at moments to glance at us—into a dense thorn-thicket. The wind favours us, so I quickly decide to make a detour to the right and cut them off. After a breathless run through the brushwood I succeed in getting within a few paces of one of the old members of the herd. This way of circumventing a herd of giraffes—my followers helping me by moving about all over the place, so as to put them off the scent—has not often proved successful with me, because it can only be managed when both wind and the formation of the country are in one's favour.

To-day I have no mind to kill the beautiful long-limbed beast, but it is delightful to get into such close touch with him. Now he is off, stepping out again, swinging his long tail, his immense neck dipping and rising like the mast of a sea-tossed ship, and the rest of the herd with him.

Now, just because I have no thought of hunting, every kind of wild animal crosses my path! Their number and variety are beyond belief. We come upon more zebras, oryx antelopes, hartebeests, Grant's gazelles, impalla antelopes; upon ostriches, guinea-fowl (*Numida reichenowi* and *Acryllium vulturinum*, Hardw.), and francolins. The recent rains seem to have conjured them all into existence here as though by magic.

But everything else has to give precedence to the elephant-tracks, which now are all mixed up, though leading clearly to the next watering-place, towards which we are directing our steps down a way trodden quite

GRANT'S GAZELLES.

A GOOD INSTANCE OF PROTECTIVE COLOURING. A HERD OF GRANT'S GAZELLES ALMOST INDISTINGUISHABLE FROM THEIR BACKGROUND OF THORN-BUSH.

A GRANT'S GAZELLE BUCK STANDING OUT CONSPICUOUSLY ON THE DRIED-UP BED OF A LAKE NOW SO INCRUSTATED WITH SALT AS TO LOOK AS THOUGH SNOW-COVERED.

FOUR GRANT'S GAZELLES.

hard by animals, evidently during the last few days. Large numbers of rhinoceroses have trampled down this way to the water, but neither they nor the elephants are to be seen in the neighbourhood while the sun is up. They are too well acquainted with the habits of their enemy man, and they keep at a safe distance out on the velt. To-day, therefore, I am to catch no glimpse of either elephant or rhinoceros. Wherever I turn my eyes, however, I see other animals of all sorts—among others, some more big giraffes. I am not to be put off, however, and I decide to follow up the tracks of a number of the elephants, evidently males, giving myself up anew to the unfailing interest I find in the study of their ways, and confirming the observations I had already made as to their finding their chief nourishment on the velt in tree-bark and small branches.

Night set in more quickly than we expected while we were pitching camp before sunset in a cutting in a thorn-thicket. Spots on which fires had recently been lit showed us that native hunters had been there a few days before, and my guides said they must have been the Wakamba people, keen elephant-hunters, with whom they live at enmity, and of whose very deadly poisoned arrows they stand in great dread. Therefore we drew close round a very small camp-fire, carefully kept down. The glow of a big fire might have brought the Wakamba people down on us if they were anywhere in the neighbourhood. It seems that natives who are at war often attack each other in the dark. It may easily be imagined, then, that the first hours of our "night's repose" were

not as blissful as they should have been! After a time, however, our need of sleep prevailed, sheer physical fatigue overcame all our anxieties, and my Wandorobo slumbered in peace. They had contrived a "charm," and had set up a row of chewed twigs all round to keep off misfortune. Unfortunately it is not so easy for a European to believe in the efficacy of these precautions! It was interesting to observe that the Wandorobo evinced much greater fear of the poisoned arrows of the Wakamba than of wild animals. In view of my subsequent experience, I myself in such a situation would view the possibility of being attacked by elephants with much greater alarm.

As it happened, however, this night passed like many another—if not without danger, at least without mishap.

Day dawned. No bird-voices greeted it, for, strange to relate, we found nothing but big game in this wooded wilderness, save for guinea-fowl (*Numida reichenowi* and *Acryllium vulturinum*, Hardw.) and francolins. The small birds seem to have known that the water would soon be exhausted, and that until the advent of the next rainy season this was no place for them.

In the grey of early morning we made our way out again into the velt. We had to visit the neighbouring watering-places and then to follow up some fresh set of elephant-tracks. It turned out that some ten big bull-elephants had visited one of the pools, and had left what remained of the water a thick yellowish mud. They had rubbed and scoured themselves afterwards against a

C. G. Schillings, phot.

THE HERDS OF GRANT'S GAZELLES ARE SOMETIMES MADE UP ENTIRELY OF MALES, SOMETIMES ENTIRELY OF FEMALES. IN THIS PICTURE WE SEE A NUMBER OF YOUNG DOES IN SEARCH OF THE SCANTY FRESH GRASS ON A PORTION OF THE VELT WHICH NOT LONG BEFORE HAD BEEN BURNT UP.

C. G. Schillings, phot.

A SMALL HERD OF GRANT'S GAZELLES. THE KILIMANJARO RANGE IN THE BACKGROUND.

clump of acacia trees. Judging from the marks upon these trees some of the elephants in this herd must have been more than eleven feet in height. With renewed zest we followed up the fresh, distinct tracks through the bush, through all their twistings and turnings. Again we came upon all kinds of other animals—among others,

YOUNG MASAI HARTEBEEST. I DID NOT SUCCEED IN MY EFFORTS TO BRING BACK A SPECIMEN OF THIS SPECIES.

a herd of giraffes right in our path. But these were opportunities for the naturalist only, not for the sportsman who was keeping himself for the elephants and would not fire a shot at anything else unless in extreme danger. Later, at a moment when we believed ourselves to have got quite close to the elephants, I started an extraordinarily large land-tortoise—the biggest I have ever seen. I

could not get hold of it, however—I was too much taken up with the hope of reaching the elephants; but after several more hours of marching I had to call a halt in order to gather new strength. In the end we did not overtake them. They had evidently been seriously disquieted either by us or earlier by the Wakamba people. While we were pitching our camp in the evening, nearly a day's journey from our camp of the night before, we sighted one after another three herds of elands and four rhinoceroses on their way out into the velt to graze. During these two days I had come within shot of about ten rhinoceroses while on the march, and had caught glimpses of many more in the distance.

The third day's pursuit of the elephants also proved entirely fruitless. We did not even come within sight of a female specimen.

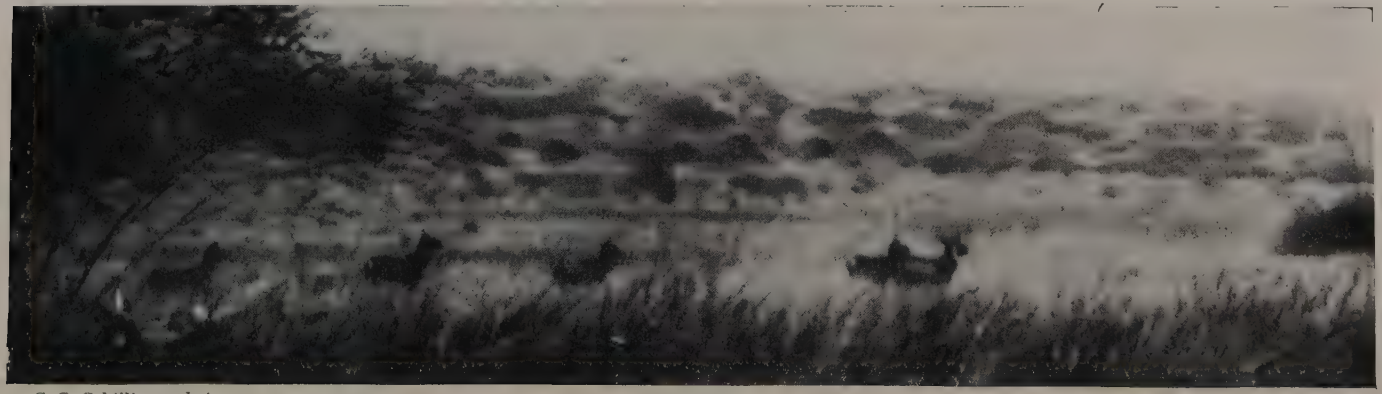
My guides were now of opinion that the animals must be so thoroughly alarmed that any further pursuit would be almost certainly in vain, so we made our way back as best we could in a zigzag course to my main camp, and reached it on the morning of the fourth day.

Most elephant-hunts in Equatorial Africa run on just such lines as these and with the same result, yet they are among the finest and most interesting experiences that any sportsman or naturalist can hope to have. The wealth of natural life that had been given to my eyes during those three days was simply overpowering. But if you have once succeeded in getting within range of an African elephant, all other kinds of wild animals seem small fry to you. You have the same kind of feeling that the German

C. G. Schillings, phot.

A HERD OF HARTEBEESTS (*BUBALIS COKEI*, Gthr.).

HARTEBEESTS WITH YOUNG.



C. G. Schillings, phot.

WATERBUCK.

sportsman has when after a *Brunft* stag—he cares for no other kind of game; he has no mind for anything but the stag. But the elephant fever attacks you out in Africa even more virulently than the stag fever here at home.

Yet it is fine to remember one's ordinary shooting expeditions in the tropics. You need some luck, of course—the velt is illimitable and the game scattered all over it. But if the rains have just ceased, if you have secured good guides, if you yourself are equal to facing all the hardships, then indeed it is a wonderful experience. There is no doubt about it—you have to be ready for a combination of every kind of strain and exertion. You can stand it for a day perhaps, or two or three, but you must then take a rest. The man who has gone through with this may venture on the experiment of pursuing elephants for several days together. He will, I think, bear me out in saying that until you have done that also you do not know the limits of endurance and fatigue.

The most glorious hour in the African sportsman's life is that in which he bags a bull-elephant. When he succeeds in bringing the animal down at close range in a thicket such as I have so often described, his heart beats with delight—it is just a chance in such cases what your fate may be. Wide as are the differences in the views taken by experienced travellers and by other writers in regard to African sport in general, they are all agreed that elephant-hunting is the most dangerous task a man can set himself. The hunting of Indian or Ceylon elephants—save in the case of a "rogue"—is not to be

compared with the African sport as I understand it. I do not mean the easy-going, pleasure-excursion kind of hunt ordinarily gone in for in the African bush, but a one-man expedition, in which the sportsman sets himself deliberately to bag his game single-handed. That, indeed, is my idea of how one should go after big game in such countries as Africa in all circumstances whatever.

Barely as many as a dozen elephants have fallen to my rifle. Some of these I killed in order to try and get hold of a young specimen which I might bring to Europe in good condition—a desire which I have long cherished, but which has not yet been fulfilled. Others I killed so that I might present them to our museums.

There were immense numbers of other bull-elephants that I might have shot, and that are probably now roaming the velt, but that I had to spare because I was more intent upon photographing them. My photographs are, however, ample compensation to me. While, too, it is pleasant to me to reflect that I have left untouched so many elephants that came within easy range, I hope, none the less, some day to bring down a specimen adorned with a really splendid pair of tusks. This is an aspiration not often realised by African sportsmen, even when they have been hunting for half a lifetime. Elephants with tusks weighing nearly five hundred pounds, like those in our illustration, are extremely rare—even in earlier times they were met with perhaps once in a hundred years.

The hunting of an African elephant, I repeat in conclusion, is a source of the greatest delight to the

C. G. Schillings, phot.

THE SKINNING OF AN ELEPHANT. THIS SPECIMEN IS NOW IN THE NATURAL HISTORY MUSEUM, BERLIN.

C. G. Schillings, phot.

PREPARING TO SKIN AN ELEPHANT.

sportsman, for even if he does not bag his game he is well rewarded for his pains by all the interest and excitement of the chase. But no one who has not himself gone through with it can estimate what it involves. Even with the most perfected equipment in regard to arms, it is often a matter of luck whether you kill the animal outright and on the spot.

An experience I had in the Berlin Zoological Gardens illustrates this. I was called in to dispatch a huge bull-elephant which had to be killed, and which had rejected all the forms of poison that had been administered to it. In order to give it a quick and painless end I selected a newly invented elephant-rifle, calibre 10·75, loaded with 4 gr. of smokeless powder and a steel-capped bullet. On reflection the steel cap seemed to me too dangerous in the circumstances, so I had it filed off. I shall allow Professor Schmalz to describe what now happened: "The first shot entered the skin between the second and third ribs, and then simply went into splinters. It did no serious damage to the interior organs, and a stag thus wounded would merely take madly to flight. A piece of the cap reached the lung, but only a single splinter had penetrated, causing a slight flow of blood. The second shot was excellently placed, namely just below the root of the lung. It lacerated both the lung arteries and both the bronchial, and thus caused instant death."

The fact that, with such a charge, a bullet fired at a distance of less than four yards should have gone into splinters in this way says more than one could in a long

disquisition, and serves to explain the secret of many a mishap in the African wilderness.[1]

[1] Latterly many sportsmen in the tropics have taken again to the use of very large-calibre rifles. Charges of as much as 21 gr. of black powder and a $26\frac{3}{4}$ mm. bullet are employed with them. It is to the kick of such a rifle that the author owes the scar which is visible in the portrait serving as frontispiece to this book—an "untouched" photograph, like all the others.

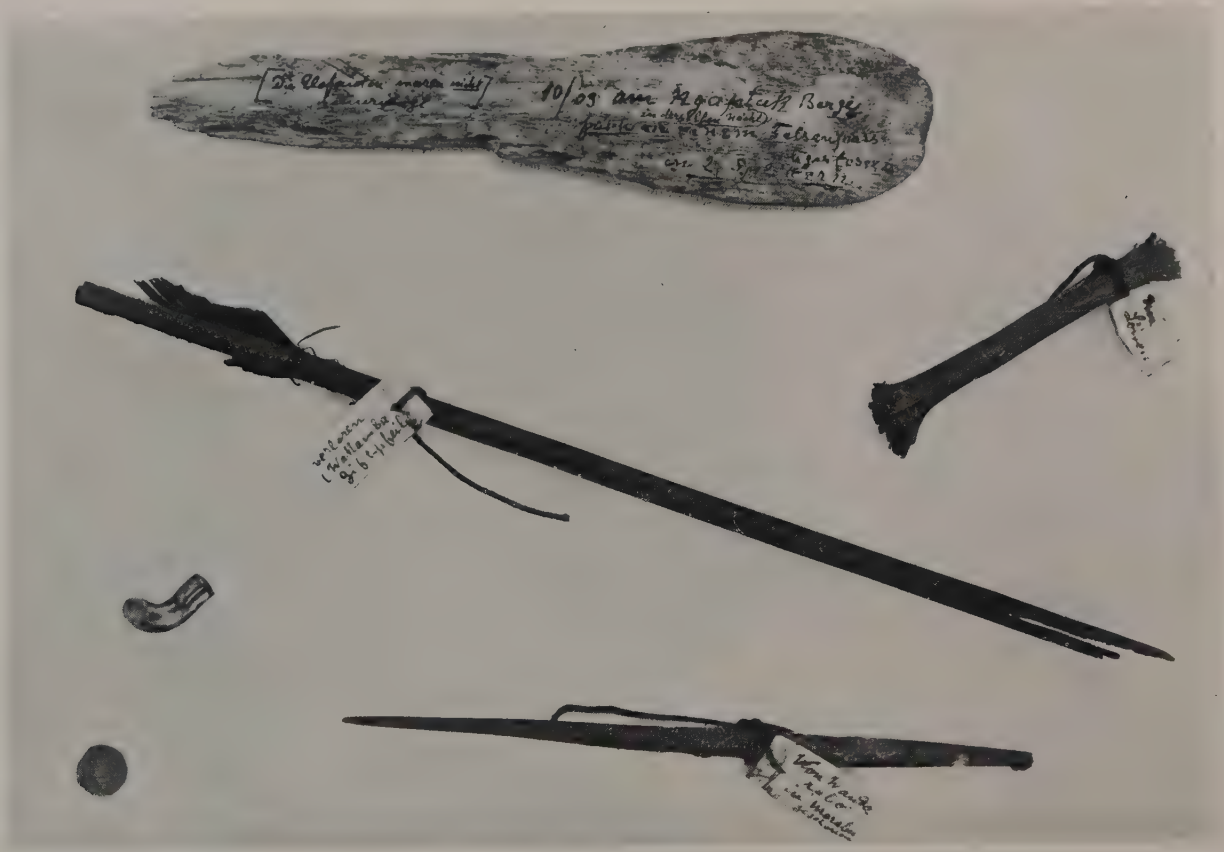
A MISSIONARY'S DWELLING NEAR KILIMANJARO IN WHICH I STAYED SEVERAL TIMES AS GUEST.

C. G. Schillings, phot.

HEAD OF A BULL-ELEPHANT KILLED BY THE AUTHOR. NOW IN THE NATURAL HISTORY MUSEUM, BERLIN.

C. G. Schillings, phot.

A FINE SPECIMEN OF A BULL-ELEPHANT KILLED BY THE AUTHOR.



C. G. Schillings, phot.

SOME AFRICAN TROPHIES. 1. SPLINTER FROM AN ELEPHANT-TUSK BROKEN OFF IN A ROCKY REGION. 2. PORTION OF A TREE BRANCH WHICH I FOUND STUCK IN THE JAW OF A CAPTURED LION. 3. PORTION OF A POISONED ARROW WHICH HAD BEEN STICKING IN AN ELEPHANT THAT I WAS TRACKING; ARROW OF THE KIND USED BY THE WAKAMBA HUNTERS. 4. NICKEL BULLET, PUT OUT OF SHAPE, WITH WHICH I BROUGHT DOWN AN ELEPHANT. 5. IRON BULLET USED BY

BLACK-HEADED HERONS (*ARDEA MELANOCEPHALA*. VIG. Childr.).

X

Rhinoceros-hunting

MANY sportsmen of to-day have no idea what numbers of rhinoceroses there used to be in Germany in those distant epochs when the cave-dweller waged war with his primitive weapons against all the mighty animals of old—a war that came in the course of the centuries to take the shape of our modern sport.

The visitor to the zoological gardens, who knows nothing of "big game," finds it hard perhaps to think of the great unwieldy "rhino" in this capacity. Yet I am continually being asked to tell about other experiences of my rhinoceros-hunting. I have given some already in *With Flashlight and Rifle*. Let me, then, devote this chapter to an account of some expeditions after the two-horned African rhinoceros—one of the most interesting, powerful, and dangerous beasts still living.

Rhinoceroses used to be set to fight with elephants in the arena in Rome in the time of the Emperors. It is interesting to note that, according to what I have often heard from natives, the two species have a marked antipathy to each other. It is recorded that both Indian and African rhinoceroses used to be brought to Europe alive. In our own days they are the greatest rarities in the animal market, and must be almost worth their weight in gold. Specimens of the three Indian varieties are now scarcely to be found, while the huge white rhinoceros of South Africa is almost extinct. The two-horned rhinoceros of East Africa is the only variety still to be met with in large numbers, and this also is on its way swiftly to extermination.

The kind of hunt I am going to tell of belongs to quite a primeval type, such as but few modern sportsmen have taken part in. But it will be a hunt with modern arms. It must have been a still finer thing to go after the great beast, as of old, spear in hand. That is a feeling I have always had. There is too little romance, too much mechanism, about our equipment. In this respect there is a great change from the kind of hunting known to antiquity.

It was strength pitted against strength then. Strength and skill and swiftness were what won men the day. Later came a time when mankind learnt a lesson from the serpent and improved on it, discharging poisoned darts from tightened bow-strings. The slightest wound from them brought death. Then there was another step in advance, and the hunter brought down his game at

C. G. Schillings, phot.

RHINOCEROS HEADS.

C. G. Schillings, phot.

RHINOCEROS HEADS.

even greater ranges with bullets of lead and steel. A glance through the telescopic sight affixed to the perfected rifle of to-day, a gentle pressure with the finger, and the rhinoceros, all unconscious of its enemy in the distance, meets its end.

But there is at least more danger and more romance for the modern hunter in this unequal strife when it takes place in a wilderness where bush and brushwood enforce a fight at close quarters. Then, if he doesn't kill his beast outright on the spot, or if he has to deal with several at a time, the bravest man's heart will have good reason to beat fast.

Now for our start.

We make our way up the side of a hill with the first rays of the tropical sun striking hot already on the earth. The country is wild, the ascent is difficult, and we have to dodge now this way, now that, to extricate ourselves from the rocky valley into which we have got. The vegetation all around us is rank and strange ; strong grass up to our knees, and dense creepers and thorn-bushes retard our progress. Here are the mouldering trunks of giant trees uprooted by the wind, there living trees standing strong and unshaken. But as we advance we come gradually to a more arid stretch, and green vegetation gives place to a rocky region, broken into crevices and chasms. Here we find the rock-badger in hundreds. But the leaders have given their warning sort of whistle, and they are all off like lightning. It may be quite a long time before they reappear from the nooks and crannies to which they have fled. Lizards share these

localities with them, and seem to exchange warnings of coming danger. A francolin flies up in front of us with a clatter of wings, reminding one very much of our own beautiful heath-cock. The "cliff-springer" that miniature African chamois, one of the loveliest of all the denizens of the wilderness, sometimes puts in an appearance too. It is a mystery how it manages to dart about from ridge to ridge as lightly as an india-rubber ball. If you examine through your field-glasses, you discover to your astonishment that they do not rest on their dainty hoofs like others of their kind, nor can they move about on them in the same fashion. They can only stand on the extreme points of them. It looks almost as though nature were trying to free a mammal from its bonds to mother earth, when you see the "cliff-springer" fly through the air from rock to rock. It would not astonish you to find that it had wings. Now here, now there, you hear its note of alarm, and then catch sight of it. It would be difficult to descry these animals at all, only that there are generally several of them together. . . . Deep-trodden paths of elephants and rhinoceroses cut through the wooded wilderness; paths used also by the heavy elands, which are fitted for existence alike in the deep valleys and high up on the highest mountain. I myself found their tracks at a height of over 6,000 feet, and so have all African mountain-climbers worthy of the name, from Hans Meyer, the first man to ascend Kilimanjaro, down to Uhlig, who, on the occasion of his latest expedition up to the Kibo, noted the presence of this giant among antelopes at a height of 15,000 feet.

C. G. Schillings, phot.

AN ELAND BULL (*ORE.IS LIVINGSTONI.* Sclat.). I MANAGED TO PREPARE THIS ANIMAL'S SKIN SUCCESSFULLY, AND IT MAY NOW BE SEEN IN FLAWLESS CONDITION IN THE BERLIN NATURAL HISTORY MUSEUM.

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It is strange to contrast the general disappearance of big game in all other parts of the earth with their endless profusion in those regions which the European has not yet opened out. I feel that it sounds almost incredible when I talk of having sighted hundreds of rhinoceroses with my own eyes: incredible to the average man, I mean, not to the student of such matters. Not until the mighty animal has been exterminated will the facts of its existence —in what numbers it throve, how it lived and how it came to die—become known to the public through its biographer. We have no time to trouble about the living nowadays.

For weeks I had not hunted a rhinoceros—I had had enough of them. I had need of none but very powerful specimens for my collection, and these were no more to be met with every day than a really fine roebuck in Germany. It is no mean achievement for the German sportsman to bag a really valuable roebuck. There are too many sportsmen competing for the prize—there must be more than half a million of us in all!

It is the same with really fine specimens of the two-horned bull-rhinoceros. It is curious, by the way, to note that, as with so many other kinds of wild animals, the cow-rhinoceros is furnished with longer and more striking-looking horns than the bull, though the latter's are thicker and stronger, and in this respect more imposing. The length of the horns of a full-grown cow-rhinoceros in East Africa is sometimes enormous—surpassed only by those of the white rhinoceroses of the South, now almost extinct. The British Museum contains specimens

measuring as much as $53\frac{1}{2}$ inches. I remember well the doubts I entertained about a 54-inch horn which I saw on sale in Zanzibar ten years ago, and was tempted to buy. Such a growth seemed to me then incredible, and several old residents who ought to have known something about it fortified me in my belief that the Indian dealer had "faked" it somehow, and increased its length artificially. It might still be lying in his dimly lit shop instead of forming part of my collection, only that on my first expedition into the interior I saw for myself other rhinoceroses with horns almost as long, and on returning to Zanzibar at once effected its purchase. A second horn of equal length, but already half decayed when it was found on the velt, came into my possession through the kindness of a friend. I myself killed one cow-rhinoceros with very remarkable horns, but not so long as these.

There is something peculiarly formidable and menacing about these weapons of the rhinoceros. Not that they really make him a more dangerous customer for the sportsman to tackle, but they certainly give that impression. The thought of being impaled, run through, by that ferocious dagger is by no means pleasant.

In something of the same way, a stag with splendid antlers, a great maned lion, or a tremendous bull-elephant sends up the sportsman's zest to fever-pitch.

It is astonishing how the colossal beast manages to plunge its way through the densest thicket despite the hindrance of its great horns. It does so by keeping its head well raised, so that the horn almost presses against

C. G. Schillings, phot

AN ELAND, JUST BEFORE I GAVE IT A FINISHING SHOT.

the back of its massive neck, very much after the style of our European stag. But it is a riddle, in both cases, how they seem to be impeded so little.

I felt nearly sure that I could count on finding some gamesome old rhinoceroses up among the mountains, and my Wandorobo guides kept declaring that I should see some extraordinary horns. They were not wrong.

I strongly advise any one who contemplates betaking himself to the velt after big game to set about the enterprise in the true sporting spirit, making of it a really genuine contest between man and beast—a genuine duel—not an onslaught of the many upon the one. Many English writers support me in this, and they understand the claims of sport in this field as well as we Germans do at home. The English have instituted clearly defined rules which no sportsman may transgress. In truth, it is a lamentable thing to see the *Sonntagsjäger* importing himself with his unaccustomed rifle amid the wild life of Africa!

I shall always look back with satisfaction to the great Schöller expedition which I accompanied for some time in 1896. Not one of the natives, not one of the soldiers, ventured to shoot a single head of game throughout that expedition, even in those regions which until then had never been explored by Europeans. The most rigid control was exercised over them from start to finish. I have good grounds for saying that this spirit has prevailed far too little as a general thing in Africa.

I have invariably maintained discipline among my own followers, and they have always submitted to it. How

difficult it is to deal with them, however, may be gathered from the following incident which I find recorded in my diary.

On the occasion of my last journey, a black soldier, an Askari, had been told off to attach himself for a time to my caravan. Presently I had to send him back to the military station at Kilimanjaro with a message. A number of my followers accompanied him, partly to fetch goods, etc., from my main camp, partly on various other missions that had to be attended to before we advanced farther into the velt. The Askari was provided, as usual, with a certain number of cartridges. When my men returned, a considerable time afterwards, I discovered quite accidentally that one of them bore marks on his body of having been brutally lashed with a whip. His back was covered with scars and open wounds. After the long-suffering manner of his kind, he had said nothing to me about it until his condition was revealed to me by chance—for, as he was only one of the hundred and fifty attached to my expedition, I might never have noticed it. It transpired that not long after he had set out the Askari, against orders, had shot big game and, among other animals, had bagged a giraffe, whose head—a valuable trophy—he had forced my bearers to carry for him to the fort. The particular bearer in question had quite rightly refused, whereupon the Askari had thrashed him most barbarously with a hippopotamus-hide whip—a *sjambok*. I need hardly say that he was suitably punished for this when I lodged a formal complaint against him. Had it not been for his ill-treatment of my bearer, however, I

should never have heard of the Askari's shooting the giraffe, for he had succeeded in terrorising all the men into silence.

Now we move onwards, following the rhinoceros-tracks up the hill-slopes, where they are clearly marked, and in among the steep ridges, until they elude us for a while

AN ELAND BULL, THE LEADER OF A HERD WHICH AT THE MOMENT OF THIS PHOTOGRAPH WAS IN CONCEALMENT BEHIND THE THORN-BUSHES.

in the wilderness. Presently we perceive not merely a hollowed-out path wrought in the soft stone by the tramplings of centuries, but also fresh traces of rhinoceroses that must have been left this very day. We are in for a first-rate hunt.

We have reached the higher ranges of the hills and are

looking down upon the extensive, scantily-wooded slopes. Are we going to bag our game to-day?

I could produce an African day-book made up of high hopes and disappointments. Not, indeed, that returning empty-handed meant ill-humour and disappointment, or that I expected invariable good luck. But a day out in the tropics counts for at least a week in Europe, and I like to make the most of it. Then, too, I had to reserve my hunting for those hours when I could give myself up to it body and soul. How often while I have been on the march at the head of heavily laden caravans have the most tempting opportunities presented themselves to me, only to be resisted—fine chances for the record-breaker and irresponsible shot, but merely tantalising to me!

On we go through the wilderness, still upwards. I am the first European in these regions, which have much of novelty for my eyes. The great lichen-hung trees, the dense jungle, the wide plains, all charm me. The heat becomes more and more oppressive, and I and my followers are beginning to feel its effects. We are wearying for a halt, but we must lose no time, for we have still a long way before us, whether we return to our main camp or press onwards to that wooded hollow yonder, four hours' march away, there to spend the night.

A vast panorama has been opening out in front of us. We have reached the summit of this first range of hills, and are looking down on another deep and extensive valley. My field-glasses enable me to descry in the far distance a herd of eland making their way down the hill, and two bush-buck grazing hard by a thicket. But these have

no interest for us to-day: we are in pursuit of bigger game. Suddenly, an hour later, my men become excited. "Pharu, bwana!" they whisper to me from behind, pointing down towards a group of acacia trees on a plateau a few hundred paces away. True enough, there are two rhinoceroses. I perceive first one, then the other lumbering along, looking, doubtless, for a suitable resting-place. My field-glasses tell me that they are a pair, male and female, both furnished with big horns. Now for my plan of campaign. I have to make a wide circuit which will take me twenty-five minutes, moving over difficult ground.

Arrived at the point in question, I rejoice to see that the animals have not got far away from where I first spied them. The wind is favourable to me here, and there is little danger at this hour of its suddenly veering round. I examine my rifle carefully. It seems all right. My men crouch down by my order, and I advance stealthily alone.

I am under a spell now. The rest of the world has vanished from my consciousness. I look neither to right nor left. I have no thought for anything but my quarry and my gun. What will the beasts do? Will this be my last appearance as a hunter of big game? Is the rhinoceros family at last to have its revenge?

I have another look at them through my field-glasses. The bull has really fine horns; the cow good enough, but nothing special. I decide therefore to secure him alone if possible, for his flesh will provide food in plenty for my men. On I move, as noiselessly as possible, the wind still in my favour. Up on these heights the rhinoceroses miss their watchful friends the ox-peckers,

so faithful to them elsewhere, to put them on their guard.

Often have my followers warned me of the presence of a "Ndege baya"—a bird of evil omen. Many of the African tribes seem the share the old superstitions of the Romans in regard to birds. Certainly one cannot help being impressed by the way in which the ox-peckers suddenly whizz through the air whenever one gets within range of buffalo or hippopotami.

The unexpected happens. The two huge beasts—how, I cannot tell—have become aware of my approach. As though moved by a common impulse, they swing round and stand for a moment motionless, as though carved in stone, their heads turned towards me. . . . They are two hundred paces away. Now I must show myself. Two things can happen: either they will both come for me full pelt, or else they will seek safety in flight. An instant later they are thundering down on me in their unwieldy fashion, but at an incredible pace. These are moments when your life hangs by a thread. Nothing can save you but a well-aimed bullet. This time my bullet finds its billet. It penetrates the neck of the leading animal—the cow, as always is the case—which, tumbling head foremost, just like a hare, drops as though dead. A wonderful sight, lasting but a second. The bull pulls up short, hesitates a moment, then swerves round, and with a wild snort goes tearing down the hill and out of sight. I keep my rifle levelled still at the female rhinoceros, for I have known cases when an animal has got up again suddenly, though mortally wounded, and done damage.

C. G. Schillings, phot.

RHINOCEROSES SHED THEIR HORNS FROM TIME TO TIME AND DEVELOP NEW ONES. THE COW-RHINOCEROS IN THIS PHOTOGRAPH HAD SHED BOTH OF HERS. THE RHINOCEROS WHICH I BROUGHT HOME AND PRESENTED TO THE BERLIN ZOOLOGICAL GARDENS HAS RENEWED HER FRONT HORN SEVERAL TIMES.

C. G. Schillings, phot.

A GOOD SPECIMEN.

But on this occasion the precaution proves needless. The bullet has done its work, and I become the possessor of two very fair specimens of rhinoceros horns.

It was scarcely to be imagined that in the course of this same day I was to get within range of eight more rhinoceroses. It is hard to realise what numbers of them there are in these mountainous regions. It is a puzzle to me that this fact has not been proclaimed abroad in sporting books and become known to everybody. But then, what did we know, until a few years ago, of the existence of the okapi in Central Africa? How much do we know even now of its numbers? For that matter, who can tell us anything definite as to the quantities of walruses in the north, or the numbers of yaks in the Thibetan uplands, or of elks and of bears in the impenetrable Alaskan woods?

It seems to be the fate of the larger animals to be exterminated by traders who do not give away their knowledge of the resources of the hunting regions which they exploit. English and American authors, among them so high an authority as President Roosevelt, bear me out in this. I remember reading as a boy of a traveller, a fur-trader, who happened to hear of certain remote northern islands well stocked with the wild life he wanted. He kept the information to himself, and made a fortune out of the game he bagged; but when he quitted the islands their entire fauna had been wiped out. The same thing is now happening in Africa. Our only clue to the extent of the slaughtering of elephants now being carried on is furnished by the immense quantities of ivory that

come on the market. So it is, too, with the slaughtering of whales and seals for the purposes of commerce. It is with them as with so many men—we shall begin to hear of them when they are dead.

But to come back to our rhinoceroses. Not long before sunset I saw another animal grazing peacefully on a ridge just below me, apparently finding the short grass growing there entirely to his taste. The monstrous outlines of the great beast munching away in among the jagged rocks stood out most strikingly in the red glow of the setting sun. It would have been no good to me to shoot him, for all my thoughts were set on finding a satisfactory camping-place for the night. Soon afterwards I came suddenly upon two others right in my path—a cow with a young one very nearly full grown. In a moment my men, who were a little behind, had skedaddled behind a ridge of rocks. I myself just managed to spring aside in time to escape the cow, putting a great boulder between us. Round she came after me, and I realised as never before the degree to which a man is handicapped by his boots in attempting thus to dodge an animal. It was a narrow escape, but in this case also a well-aimed bullet did the trick. We left the body where it lay, intending to come back next morning for the horns. Some minutes later, after scurrying downhill for a few hundred paces as quickly as we could, so as to avoid being overtaken by the night, we met three other rhinoceroses which evidently had not heard my shot ring out. They were standing on a grassy knoll in the midst of the valley which we had now reached,

C. G. Schillings, phot.

A SNAPSHOT AT TWENTY PACES WITH A HAND-CAMERA, WHICH I HAD TO THROW AWAY THE NEXT SECOND, FOR THE "RHINO" MADE FOR ME AND ONLY TURNED ASIDE WHEN IT HAD GOT WITHIN THREE PACES OF ME!

and did not make off until they saw us. By the stream, near which we pitched our camp for the night, we came upon two more among some bushes, and yet another rushing through a thicket which we had to traverse on our way to the waterside. In the night several others passed down the deep-trodden path to the stream, fortunately heralding their approach by loud, angry-sounding snorts.

Many such nights have I spent out in the wild; but I would not now go through with such experiences very willingly, for I have heard tell of too many mishaps to other travellers under such conditions. That seasoned Rhenish sportsman Niedieck, for instance, in his interesting book *Mit der Büchse in fünf Weltteilen*, gives a striking account of a misadventure he met with in the Sudan, near the banks of the Nile. In very similar circumstances his camp was attacked by elephants during the night; he himself was badly injured, and one of his men nearly killed. This danger in regions where rhinoceroses or elephants are much hunted is by no means to be underestimated. Rather it should be taken to heart. According to the same writer, the elephants in Ceylon sometimes "go for" the travellers' rest-houses erected by the Government and destroy them. These things have brought it home to me that I was in much greater peril of my life during those night encampments of mine on the velt and in primeval forests than I realised at the time.

In those parts of East Africa there is a tendency to imagine that a zareba is not essential to safety, and that

a camp-fire serves all right to frighten lions away. It is a remarkable comment on this that over a hundred Indians employed on the Uganda Railway should have been seized by lions. In other parts of Africa even the natives are reluctant to go through the night unprotected by a zareba, because they know that lions when short of other prey are apt to attack human beings, and neither the hunter nor his camp-fire have any terrors for them.

However that may be, the true sportsman and naturalist in the tropics will continue to find himself obliged to encamp as best he may *à la belle étoile*, trusting to his lucky star to protect him as he sinks wearily to sleep.

* * * * *

The long caravan is again on the move, like a snake, over the velt. Word has come to me that at a distance of a few days' march there has been a fall of rain. As by a miracle grass has sprung up, and plant-life is reborn, trees and bushes have put out new leaves, and immense numbers of wild animals have congregated in the region. Thither we are making our way, over stretches still arid and barren. Watering-places are few and far between and hidden away. But we know how to find them, and hard by one of them I have to pitch my camp for a time.

As we go we see endless herds of animals making for the same goal—zebras, gnus, oryx antelopes, hartebeests, Grant's gazelles, impallahs, giraffes, ostriches, as well as numbers of rhinoceroses, all drawn as though by magic to the region of the rain.

With my taxidermist Orgeich I march at the head of

my caravan. My camera has to remain idle, for once

HOW ONE OF MY MEN SOUGHT SHELTER WHEN THE RHINOCEROS CAME FOR US.

again, as so often happens, we get no sun. It would be useless to attempt snapshots in such unfavourable light.

Suddenly, at last, the entire aspect of the velt undergoes a change, and we have got into a stretch of country which has had a monopoly of the downfall. It is cut off quite perceptibly from the parched districts all around, and its fresh green aspect is refreshing and soothing to the eye. On and on we march for hour after hour, the wealth of animal life increasing as we go. Early this morning I had noted two rhinoceroses bowling along over the velt. They had had a bath and were gleaming and glistening in the sun.

Now we descry a huge something, motionless upon the velt, looking at first like the stump of a massive tree or like a squat ant-hill, but turning out on closer investigation to be a rhinoceros. It may seem strange that one can make any mistake even at one's first sight of the animal, but every one who has gone after rhinoceroses much must have had the same astonishing or alarming experience.

In this case we have to deal with an unusually large specimen—a bull. It seems to be asleep. My sporting instincts are aroused. My men halt and crouch down upon the ground. I hold a brief colloquy with Orgeich. He also gets to the rear. I advance towards the rhinoceros over the broken ground between us—the wind favouring me, and a few parched-looking bushes serving me as cover. I get nearer and nearer—now I am only a hundred and fifty paces off, now only a hundred. The great beast makes no stir—it seems in truth to be asleep. Now I have got within eighty paces, now sixty. Between me and my adversary there is nothing but three-foot-high parched

shrubs, quite useless as a protection. Ah! now he makes a move. Up goes his mighty head, suddenly all attention. My rifle rings out. Spitting and snorting, down he comes upon me in the lumbering gallop I have learnt to know so well. I fire a second shot, a third, a fourth. It is wonderful how quickly one can send off bullet after

A RHINOCEROS IN THE DRY SEASON, ITS BODY EMACIATED BY THE SCANTINESS OF GRAZING-GROUNDS AND DRINKING-PLACES.

bullet in such moments. Now he is upon me, and I give him a fifth shot, *à bout portant*. In imagination I am done for, gashed by his great horn and flung into the air. I feel what a fool I was to expose myself in this way. A host of such impressions and reflections flash through my brain.

But, as it turns out, my last hour has not yet come.

On receipt of my fifth bullet my assailant swerves round and lays himself open to my sixth just as he decides to take flight. Off he speeds now, never to be seen again, though we spend an hour trying to mark him down—a task which it is the easier for us to undertake in that he has fled in the direction in which we have to continue our march.

Orgeich, in his good-humoured way, remarks drily, "That was a near thing."

Such "near things" may fall to the lot of the African hunter, however perfectly he may be equipped.

On another occasion, two rhinoceroses that I had not seen until that moment made for me suddenly. In trying to escape I tripped over a moss-covered root of a tree, and fell so heavily on my right hip that at first I could not get up again. Both the animals rushed close by me, Orgeich and my men only succeeding in escaping also behind trees at the last moment.

* * * * *

To descry one or two rhinoceroses grazing or resting in the midst of the bare velt and to stalk them all by yourself, or with a single follower to carry a rifle for you, is, I really think, as fascinating an experience as any hunter can desire. At the same time it is one of the most dangerous forms of modern sport. An English writer remarks with truth that even the bravest man cannot always control his senses on such occasions—that he is apt to get dazed and giddy. And the slightest unsteadiness in his hand may mean his destruction. He has to advance a long distance on all fours, or else wriggle along on his

PIECE OF VERY HARD STONE FROM THE SIRGOI MOUNTAIN IN BRITISH EAST AFRICA, PRESENTED TO ME BY ALFRED KAISER. RHINOCEROSES WHET THEIR HORNS AGAINST THIS KIND OF STONE, MAKING ITS SURFACE QUITE SMOOTH.

stomach like a serpent, making the utmost use of whatever cover offers, and keeping note all the time of the direction

of the wind. He has to keep on his guard all the time against poisonous snakes. And he has to trust to his hunter's instinct as to how near he must get to his quarry before he fires. I consider that a distance of more than a hundred paces is very hazardous—above all, if you want to kill outright. I am thinking, of course, of the sportsman who is hunting quite alone.

To-day I am to have an unlooked-for experience. A number of eland have attracted my attention. I follow them through the long grass, just as I did that time in 1896 when the flock of pearl-hens buzzed over me and I started the two rhinoceroses which nearly "did for" me.[1] These antelopes claim my undivided attention. The country is undulating in its formation, and my men are all out of sight. I am quite alone, rifle in hand. The animals make off to the left and in amidst the high grass. I stand still and watch them. It would be too far to have a shot at the leader of the herd, so I merely follow in their tracks, crouching down. Now I have to get across a crevice. But as I am negotiating it and penetrating the higher grass on the opposite slope, suddenly, fifty paces in front of me, I perceive a huge dark object in among the reeds—a rhinoceros.

It has not become aware of me yet, nor of the peril awaiting it. It sits up, turned right in my direction. Now there is no going either forwards or backwards for me. The grass encumbers my legs—the old growth (spared by the great fires that sometimes ravage the whole velt between two rainy seasons) mingling with the new

[1] See *With Flashlight and Rifle.*

C. G. Schillings, phot.

RHINOCEROSES OFTEN REMAIN IN THIS SITTING POSTURE FOR QUITE A LONG TIME.

[p. 464

into an inextricable tangle. Such moments are full of excitement. It is quite on the cards that a second rhinoceros—perhaps a third—will now turn up. Who knows? Moreover, I have absolutely no inducement to bag the specimen now before my eyes—its horns are not of much account. I try cautiously to retreat, but my feet are entangled and I slip. Instantly I jump up again—the rhinoceros has heard the noise of my fall and is making a rush for me, spitting and snorting. It won't be easy to hit him effectively, but I fire. As my rifle rings out I hear suddenly the singing notes like a bird in the air above, clear and resonant, and I seem to note the impact of the bullet. Next instant I see the rhinoceros disappearing over the undulating plain.

I conclude that the bullet must have struck one of his horns and been turned aside, and that it startled the beast and caused him to abandon his attack.

* * * * *

But there are yet other ways in which you may be surprised by a rhinoceros. I had pitched my camp by the Pangani, in a region which at the time of Count Telekis' expedition, some years before, was a swamp. Its swampy condition lasts only during the rainy season, but I found my camping-place to be very unsatisfactory and unhealthy. I set out therefore with a few of my men to find a better position somewhere on dryer land, if possible shaded by trees, and at a spot where the river was passable—a good deal to ask for in the African bush. For hours we pursued our search through "boga" and "pori," but the marshy ground did not even enable us to get

down to the river-side. Endless morasses of reeds enfolded us, in whose miry depths the foot sinks even in the dry weather, in which the sultry heat enervates us, shut in as we are by the rank growth that meets above our heads as we grope through it. At last we reach some solid earth, and it looks as though here, beneath some sycamores, we have found a better camping place. Deep-trodden paths lead down to the waterside. We follow them through the brushwood, I leading the way, and thus reach the stream. The rush and roar of the river resounds in our ears, and we catch the notes, too, of birds. Suddenly, right in front of me, the ground seems to quicken into life. My first notion is that it must be a gigantic crocodile; but no, it is a rhinoceros which has just been bathing, and which now, disturbed, is glancing in our direction and about to attack us or take to its heels—who can say? Escape seems impossible. Clasping my rifle I plunge back into the dense brushwood. But the tough viscous branches project me forward again. Now for it. The rhinoceros is "coming for" us. We tumble about in all directions. Some seconds later we exchange stupefied glances. The animal has fled past us, just grazing us and bespattering us with mud, and has disappeared from sight. How small we felt at that moment I cannot express! In such moments you experience the same kind of sensation as when your horse throws you or you are knocked over by a motor-car. (Perhaps this latter simile comes home to one best nowadays!) You realise, too, why the native hunters throw off all their clothing when they are after big game. On

C. G. Schillings, phot.

A ROCK-POOL ON KILIMANJARO.

such occasions even the lightest covering hampers you, and perhaps endangers your life.

* * * * *

Countless thousands of two-horned rhinoceroses are still to the good in East Africa. Yes, countless thousands! Captain Schlobach tells us that he would encounter as many as thirty in one day in Karragwe in 1903 and 1904. Countless also are the numbers of horns which are secured annually for sale on the coast. But how much longer will this state of things continue? And the specimens of the white rhinoceros of South Africa which adorn the museum in Cape Town and the private museum of Mr. W. Rothschild (and which we owe to Coryndon and Varndell) are not more valuable than the specimens also to be found in the museums of the "black" rhinoceroses still extant in East Africa.

This view of the matter will perhaps receive attention fifty or a hundred years hence.

MASAI KILLING A HYENA WITH THEIR CLUBS.

XI

The Capturing of a Lion

SIMBA Station—Lion Station—is the name of a place on the Uganda Railway, which connects the Indian Ocean with the Victoria-Nyanza. It is situated near Nairobi, and the sound of its name recalls vividly to my memory January 25, 1897, the great day when I came face to face with three lions.

At that time no iron road led to the interior of the country; there were neither railway lines nor telegraph wires to vibrate to the sound of the voice of the monarch of the wilderness. But the white man was soon to bar his path by day and night along the whole length of the great railroad from lake to ocean.

"Lion Station" deserves its name, for in the vicinity of this spot over a hundred Indian workmen have been seized by lions. To me this was no surprise, for years

C. G. Schillings, phot.

IN A BETTER TEMPER.

A LION CUB IN A BAD TEMPER.

before I had visited the region, and had done full justice to its wilderness in my description of it. Some stir was caused when a lion killed a European in one of the sleeping-cars at night-time. In company with two others, the unfortunate man was passing the night in a saloon carriage which had been shunted on to a siding. One of the Europeans slept on the floor; as a precaution against mosquitoes he had covered himself with a cloth. Another was lying on a raised bunk. The lion seized the third man, who was sleeping near the two others on a camp-bed, killed him, and carried him away. One of the survivors, Herr Hübner—whose hunting-box, "Kibwezi," in British East Africa, has given many sportsmen an opportunity of becoming acquainted with African game—gave me the following account of the incident: "The situation was a critical one. The door through which the beast had entered the compartment was rolled back. I saw the creature at about an arm's length from me, standing with its fore-paws on the bed of my sleeping friend. Then a sudden snatch, followed by a sharp cry, told me that all was over. The lion's right paw had fallen on my friend's left temple, and its teeth were buried deep in his left breast near the armpit. For the next two minutes a deathly stillness reigned. Then the lion pulled the body from off the bed and laid it on the ground." The lion disappeared with the corpse into the darkness of the night. It was killed shortly after, as might be expected.

Such scenes were probably more frequent in earlier days, when, in the Orange Free State, a single hunter

would kill five-and-twenty lions. This was so even down to the year 1863, when impallah antelopes (*Æpyceros suara*) had already become very rare in Bechuanaland, and in Natal a keen control had to be instituted over the use of arms. Times have changed. In the year 1899 much sensation was aroused by the fact that a lion was killed near Johannesburg, and so far back as 1883 there was quite a to-do over a lion that was seen and killed at Uppington, on the Orange River. To Oswald and Vardon, well-known English hunters, as well as to Moffat in Bechuanaland, the encountering of as many as nine troops of lions in a day was quite an ordinary experience, and I still found lions in surprising numbers in 1896 in German and British East Africa. The practical records of the Anglo-German Boundary Commission in East Africa, the observations made lately by Duke Adolf Friedrich of Mecklenburg, and the evidence of many other trustworthy witnesses, have confirmed these facts.

Although I do not think that lions, at least in districts where game is very plentiful, are so dangerous as some would make out, yet I quite agree with the statement made by H. A. Bryden that a lion-hunt made on foot must be reckoned as one of the most dangerous sports there are. The experience of an authority like Selous, who was seized by lions during the night in the jungle, proves this.

In the region in which I had such success lion-hunting in 1897, there were many mishaps. My friend the commandant of Fort Smith in Kikuÿuland, who

was badly mauled by lions, has since had more than one fellow-sufferer in this respect.

Captain Chauncy Hugh-Stegand, who, like Mr. Hall and so many other hunters of other nationalities, had been several times injured by rhinoceroses, was once within an ace of being killed by a lion which he encountered by night, and which he shot at and pursued. Severely wounded, and cured almost by a miracle, he had to return to England to regain his health. "Such are the casualties of sportsmen in Central and East Africa" is the dry comment of Sir Harry Johnston in his preface to the English edition of my book *With Flashlight and Rifle*.

When I read about such adventures I call to mind vividly my own. I live through them all again, and the magic of these experiences reawakes in me.

To-day I would fain give the reader some account of the capturing of lions. Not of captures made by means of a net, such as skilful and brave men used in olden days to throw over the king of beasts, thus disabling him and putting him in their power, but of a capture that was not without its many intense and exciting moments.

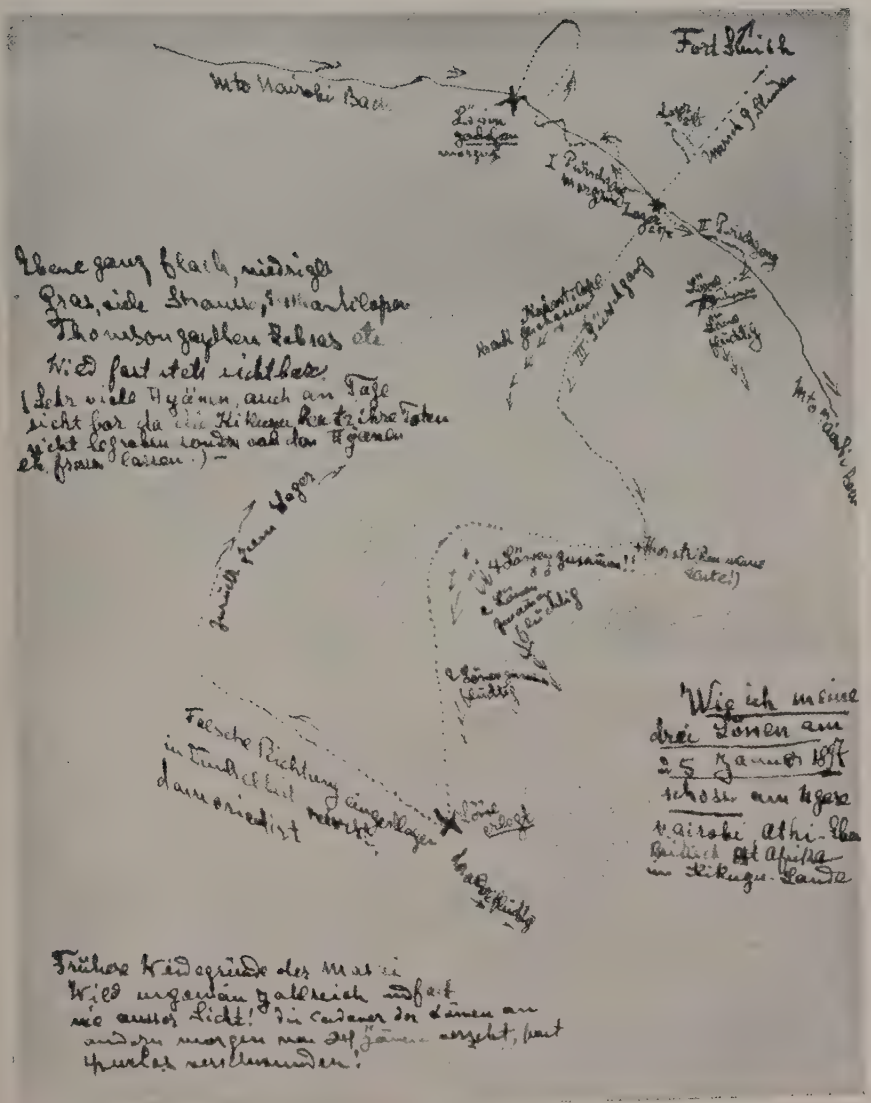
Proud Rome saw as many as five hundred lions die in the arena in one day. That was in the time of Pompey. Nearly two thousand years have passed since then, and one may safely affirm that in the intervening centuries very few lions have been brought to Europe that were caught when full grown in the desert. The many lions that are brought over to our continent are caught when young,

and then reared, despite the credence given sometimes to statements to the contrary.

It goes without saying that lions which have matured in confinement cannot compare with the lions that have come to their full development in the wilderness. Full-grown tigers and leopards are still nowadays in some cases ensnared alive, and we can see them in our zoological gardens in all their native wildness, and without any artificial breeding, marked with the unmistakable stamp common to all wild animals. It is an established fact that all captive monkeys show symptoms after a certain time of rachitis. This is also the case frequently with large felines. Lions brought up in captivity, however, have far finer manes than wild ones.

Of course a certain number of the lions used in the arena-fights in Rome were probably reared in the Roman provinces by some potentate. But without doubt a large number were caught when fully grown by means of nets, pitfalls, and other devices of which we have no precise details.

It seemed to me worth while to make a trial of the means which had once been so successful. As I have already pointed out, there is a great difference between a man who scours the wilderness solely as a hunter, and one who makes practical investigations into the life of the animal world. The sportsman may possibly sneer at the use of pitfalls. He has no mind for anything but an exciting encounter with the lion, an encounter which, thanks to modern means of warfare, is much easier for the man than formerly.



ANOTHER OF MY HUNTING CARDS. THE RECORD OF MY LION-HUNT OF THE 25TH JANUARY, 1897, ON THE ATHI PLAINS, WHEN I KILLED TWO LIONS AND A LIONESS ("LÖWE"=LION; LÖWIN=LIONESS).

However, I have no wish whatever to lay down the law on this question of the relative amount of danger involved in the shooting or the trapping of lions. In many parts of Africa lion-hunting is a matter of luck, above all where horses cannot live owing to the tsetse-fly, and where dogs cannot be employed in large numbers (as used to be the practice in South Africa) to mark down the lions until the hunter can come. For example, we have it on good authority that the members of an Anglo-Abyssinian Border Commission, aided by a pack of dogs, were able to kill about twenty lions in the course of a year. But on entering the region of Lake Rudolf all the dogs fall victims to the tsetse-fly. Hunting with a pack of dogs is very successful. Dogs were used by the three brothers Chudiakow, who, some nine years ago, near Nikolsk on the Amur, in Manchuria, killed nearly forty Siberian tigers in one winter[1]; whilst a hunting party near Vladivostock killed in one month one hundred and twenty-five wild boars and seven tigers. Tigers are so plentiful near Mount Ararat that a military guard of three men is necessary during the night-watch to ward off these beasts of prey.[2]

My extraordinary luck on January 25, 1897, when I killed three full-grown lions, fine big specimens, was of course a source of much satisfaction to me. The little sketch-map of the day's hunt which accompanies this chapter shows the route I took on that memorable

[1] In winter, Siberia affords a refuge to beautiful long-haired tigers, such as can be seen in the Berlin Zoological Gardens.

[2] For this information I am indebted to the kindness of the experienced Russian hunter Ceslav von Wancowitz.

occasion, and gives a good idea of the way in which I am accustomed to keep a record of such things in my diary. I must add that my adventures and narrow escapes while trying to secure lions have been of a kind such as would be to the taste only of those most greedy of excitement.

In 1897 I had already observed that the lion was to be found in great troops in thinly populated neighbourhoods, where he was at no loss for prey and where he had not much to fear from man. As many as thirty lions have been found together, and I myself have seen a troop of fourteen with my own eyes. Other sportsmen have seen still larger troops in East Africa. Quite recently Duke Adolf Friedrich of Mecklenburg, who, on the occasion of his second African trip, made some interesting observations in regard to lions, has borne witness to the existence of very large troops. During the period in which I devoted myself entirely to making photographic studies of wild life, and consequently left undisturbed all the different species of game which swarmed around my camp, I was sometimes surrounded for days, weeks even, by great numbers of them, sometimes to an alarming extent. I have already described how one night an old lion brushed close by my tent to drink at the brook near which we were encamping, although it was just as easy for him to drink from the same stream at any point for miles to either side of us. On another occasion, as could be seen from the tracks, lions approached our camp until within a few yards of it. When I was photographing the lions falling upon the heifers and donkeys, as described in *With Flashlight*

and Rifle, I must have been, judging by the tracks,

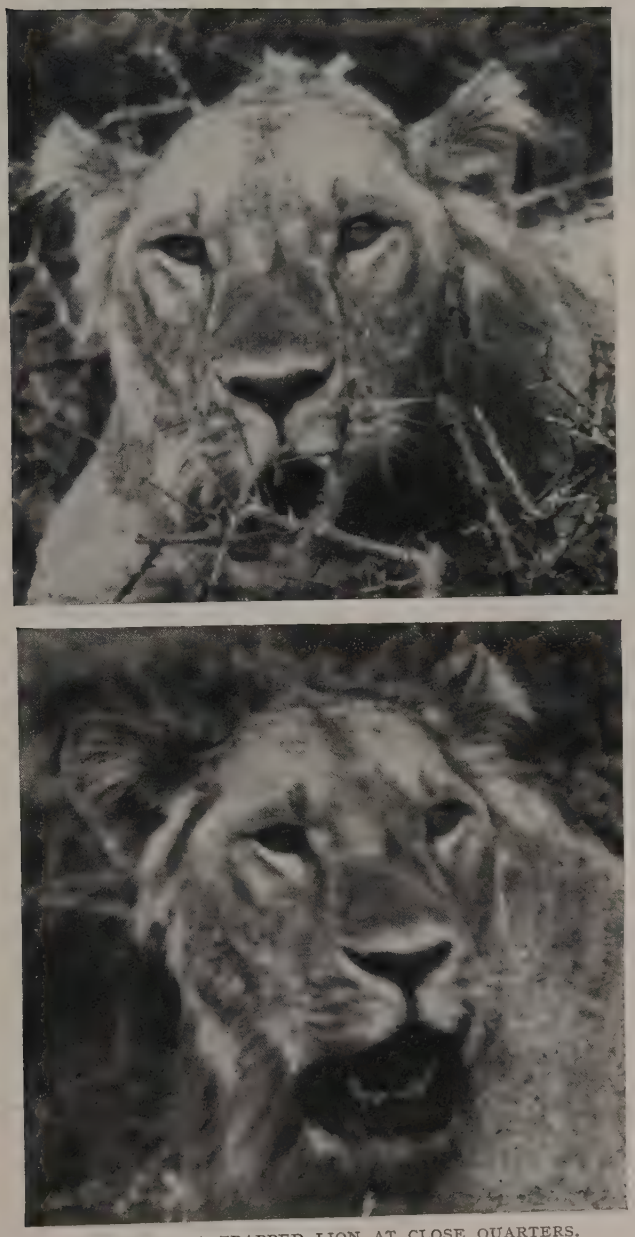
AT BAY.

surrounded by about thirty. I trapped a number of them, either for our various museums, where specimens

in various stages of development and age are much needed, or to protect the natives who were menaced by lions, or whose relatives had perhaps been seized by them.

It is the more necessary to have recourse to traps in that one may spend years hunting in Equatorial East Africa without getting a single chance of firing a shot at a lion. The hunt has to take place at night, for the lion leads a nocturnal life, and makes off into inaccessible thickets by day.

But what I was most anxious to do was to secure a specimen or two that I could bring alive to Europe. To do this, I required the lightest possible and most portable iron cages, which should yet be strong enough to resist every effort of the imprisoned animals to get free. This problem was solved for me as well as it could be by Professor Heck, the Director of the Berlin Zoological Gardens. Yet even he declared it to be impossible to make such cages under 330 lbs. in weight. For the transport of one such cage the services of six bearers would be necessary. I arranged for several such cages to be sent oversea to Tanga, and took them thence into the interior. Thus I had the assurance of keeping my captives in security, but first I had to get hold of them without hurting them. By means of a modified form of iron traps I was able to manage this eventually. Those who are not acquainted with the difficulties of transport in countries where everything has to be borne on men's shoulders will hardly be able to realise the straits to which one may be put. Thus I was much hampered, when carrying back my



STUDIES OF A TRAPPED LION AT CLOSE QUARTERS.

first lion (which was unharmed save for a few skin scratches), by a lack of bearers owing to famine and other causes.

I had found the tracks of a lioness with three quite little cubs. I followed them for an hour over the velt—they then got lost in the thick bush. As I had already observed the tracks of this little band for several days, I naturally concluded that the old lioness was making a stay in the neighbourhood. So I decided, as one of my heifers was ill from the tsetse sickness and bound to die, to pitch my tent in the neighbourhood and to bait a trap with the sick animal.

I found water at about an hour and a half's distance from the spot where I had observed the lion's tracks. I was thus obliged to encamp at this distance away. Later on in the evening, after much labour, I succeeded in setting a trap in such a way that I had every reason to hope for good results.

In the early hours of the following morning I started out, full of hope, to visit my trap. Already in the distance I could see that my heifer was still alive, and I immediately concluded that the lions had sought the open. But it was not so, for to my surprise I presently found fresh tracks of the old lioness and her cubs. Evidently she had visited the trap, but had returned into the bush without taking any notice of the easy prey. The lie of the land allowed me to read the lion's tracks imprinted into the ground as if in a book. They told me that the cubs had at one point suddenly darted to one side, their curiosity excited by a land-tortoise whose back was now reflecting the rays of

the sun, and which in the moonlight must have attracted their attention. They had evidently amused themselves for a while with this plaything, for the hard surface of the tortoise's shell was marked with their claws. Then they had returned to their mother. I concluded that the old lioness was not hungry and had no more lust for prey—another confirmation of the fact that lions, when sated, are not destructive. This new proof seemed to me to be worth all the trouble I had taken.

The two following nights, to my disappointment, the lions approached my heifer again without molesting it.

This was the more annoying because I had hoped by capturing the old lioness to obtain possession of all the young cubs as well.

In this case, as in many others, the behaviour of the heifer was a matter of great interest. As already remarked, in most cases I made use of sick cows mortally afflicted by the tsetse-fly. In many districts in German East Africa the tsetse-fly, which causes the dreadful sleeping sickness in man, also makes it impossible to keep cattle except under quite special conditions. This heifer, then, was already doomed to a painful death through the tsetse illness, and the fate I provided for it was more merciful, for the lion kills its prey by one single powerful bite. I observed, moreover, that the bound animal took its food quite placidly and showed no signs of unrest so long as the lion came up to her peaceably, as in this case. This accorded entirely with my frequent observations of the behaviour of animals towards lions on the open velt. Antelopes out on the velt apparently take very little

C. G. Schillings, phot.

THIS LION, AN OLD ANIMAL WITH A FINE MANE, HAD DRAGGED AWAY THE IRON TRAP SOME DISTANCE. HE MADE FOR ME THE MOMENT I HAD TAKEN THIS PHOTOGRAPH AT NEAR RANGE, BUT THE TRAP IMPEDED HIS MOVEMENTS AND A WELL-PLACED BULLET PUT AN END TO HIM.

[p. 488

C. G. Schillings, phot.

CARRYING IN TRIUMPH TO MY CAMP A LION WHICH I HOPED TO BRING BACK WITH ME TO EUROPE.

notice of lions, though they hold themselves at a respectful distance from them.

In spite of my want of success, I decided to try my luck once more, though the surroundings of my camp were not very alluring and game was very scarce with the exception of a herd of ostriches, which for hours together haunted the vicinity. I hoped this time the lioness would be bagged. But no, I never came across her or her young again.

Instead, on the fourth morning, I found a good maned specimen—an old male—at my mercy. Loud roars announced the fact of his capture to me from afar. The first thing was to discover whether he was firmly held by the iron, and also whether he was unhurt. I assured myself of both these points after some time, with great trouble and difficulty, and, needless to add, not without considerable danger. I leave the reader to imagine for himself the state of mind in which one approaches the King of Beasts in such circumstances. I can vouch for it that one does so with a certain amount of respect for His Majesty.

The roaring of an enraged lion, once heard, is never to be forgotten. It is kept up by my captive without intermission, a dull heavy rumble suddenly swelling to a tremendous volume of sound. The expression of its face and head, too, show fierce anger and threaten danger. The terrible jaws now scrunch the branches within reach, now open menacingly.

It was now necessary to free the lion from the trap and to bring it into camp. It would take a week to get

my cage, but meanwhile I decided to fasten the animal by means of a strong chain and with a triple yoke specially made for such a purpose in Europe.

But even the bravest of my men absolutely refused to obey my command. It needed the greatest persistence to persuade some of them, at last, to lend a helping hand to me and my assistant Orgeich. As usual they required

A CAPTURED LIONESS, SNAPSHOTTED AT THE VERY MOMENT OF BEING TRAPPED.

the stimulus of a good example. After some time I had, as can be seen on pages 485 and 499, set up my photographic apparatus right in front of the lion so as to take several photos of him at the distance of a few paces.

Then we cut a few saplings about as thick as one's arm, and with these we tried to beat down the lion so as to secure him. At first this did not succeed at all. I then

had recourse to strong cord, which I made into a lasso. It was wonderful, when I caught the head of the prisoner in the noose, to see him grip it with his teeth and to watch the thick rope fall to pieces as if cut with a pair of scissors after a few quick, angry bites. During this trial I made a false step on the smooth, grassy ground, so well known to African explorers, and was within a hair's breadth of falling

A TRAPPED LION. I HEARD HIM ROARING AT A DISTANCE OF A MILE AND A HALF.

into the clutches of the raging beast had not my good taxidermist happily dragged me back. After various further efforts, during which my people were constantly taking fright, I at length succeeded in fastening the head as well as the paws of the beast. With the help of the branches the body was laid prostrate on the ground, a gag was inserted between the teeth, the prisoner was released from

the trap and, fastened to a tree-trunk, was carried into camp.

But what takes only a few words to describe involved hours of work. It was a wonderful burden, and one not to be seen every day! In my previous book I have already described how we carried a half-grown lion in a similar manner, and I have given an illustration of the scene. Unfortunately some of my best photographs, showing my bearers carrying this full-grown lion, were lost while crossing a river.

I was full of delight at the thought of my captive as he would appear in my encampment. But to my great chagrin the lion died in it quite suddenly, evidently from heart failure. We could find no trace of any wound.

There was something really moving at this issue to the struggle, in the thought that I, using wile against strength, should have overpowered and captured this noble beast only to break his heart!

This failure made me fear that I should never succeed in capturing a lion by such methods. It seemed almost better to use a large grating-trap in which it could be kept for several days and gradually accustomed to the loss of its freedom. But this meant an expensive apparatus which was quite beyond the funds of a private individual with narrow means like myself. My efforts to capture lions by means of pits dug by the natives were quite unsuccessful, because the lions always found a way out.

A younger male lion which was entrapped lived for nearly a month chained up in my camp. This one had hurt its paw when captured, and in spite of every care

C. G. Schillings, phot.

FLASHLIGHT PHOTOGRAPH OF A LION. THE ANIMAL HAD MOVED SO SWIFTLY THAT THE APPARATUS WAS NOT QUITE IN TIME TO TAKE IN ITS WHOLE BODY.

a bad sore gradually festered. It wounded one of my people very badly by ripping open a vein in his arm when he went to feed it.

Thus terminated my efforts to bring an old lion to Europe.

Much that is easy in appearance is troublesome in reality. Even when the animal is overcome, the transportation of it to the coast is accompanied by almost insuperable difficulties. It means something to carry beast and cage, a burden amounting to something like eight hundred pounds, right through the wilderness by means of bearers. Even with the help of the Uganda Railway it has not been possible to bring home a full-grown lion. I have repeatedly caught lions for this purpose, but have always experienced ultimate failure.

Sometimes the animals would not return to the place where I had tracked or sighted them, or would steer clear of the decoy. One often meets with this experience in India with tigers, which are decoyed in much the same way, and then shot from a raised stand. Interesting information about the behaviour of tigers in such cases may be found in the publications of English hunters, as well as in the very interesting book on tropical sport by P. Niedieck, a German hunter of vast experience. I might perhaps have succeeded on subsequent occasions in transporting old lions, but I never had the strong cages at hand. Now perhaps they are rusted and rotted, as well as the other implements which I hid or buried on the velt, not having bearers enough to carry them, and hoping to find them again later.

I had a most interesting adventure, once, with a lion on the right bank of the Rufu River.

For several nights the continuous roaring of a lion had been heard in the immediate vicinity of my camp. In spite of all my attempts to get a sight of the beast by day I could not even find the slightest trace of it. Moreover, the vegetation in the neighbourhood of the river was not at all suitable for a lion-hunt. I decided to try my luck with a trap. A very decrepit old donkey was used as a bait, and killed by the lion the very first night. But to my disappointment the powerful beast of prey had evidently killed the ass with one blow, and with incredible strength had succeeded in dragging it off into the thicket without as much as touching the trap. Very early the next morning I found the tracks, which were clearly imprinted on the ground. Breathlessly I followed up the trail step by step in the midst of thick growth which only allowed me to see a few paces around me. I crept noiselessly forward, followed by my gun-bearer, knowing that in all probability I should come upon the lion.

The trail turned sharply to the left through some thick bushes. Now we came to a spot where the thief had evidently rested with his spoil; then the tracks led sharply to the right and went straight forward without a pause.

We had been creeping forward on the sunlit sand like stealthy cats, with every nerve and muscle taut, my people close behind me, I with my rifle raised and ready to fire—when, suddenly, with a weird sort of growl it leapt up right in front of us and was over the hard sand and away.

C. G. Schillings, phot.

PHOTOGRAPH TAKEN AT A DISTANCE OF ABOUT FIVE PACES OF A LION WHICH I CAPTURED ALIVE AND BROUGHT BACK TO CAMP — A SPECIMEN OF THE MANELESS LIONS OF THE MASAI VELT. SOME OF THE VERY OLD LIONS DEVELOP MANES EVEN IN THIS REGION, BUT NEVER TO THE EXTENT USUAL WITH LIONS IN CAPTIVITY, OR WITH THE ALMOST EXTINCT SPECIES OF THE ATLAS COUNTRY OR OF SOUTH AFRICA.

It is astonishing how the stampede of a lion reverberates even in the far distance!

A few steps further I came upon the remains of the ass. The lion had gained the open when I got out of the brushwood. It was useless to follow the tracks, for they led only to stony ground, where they would be lost. Discouraged, I gave up the pursuit for the time, but only

MY PLUCKY TAXIDERMIST MANAGED TO GET THIS CAPTURED HYENA UNHARMED INTO CAMP, PROTECTING HIMSELF WITH A BIG CUDGEL.

to return a few hours later. Approaching very cautiously to the place where I had left the remains of the donkey, we found they were no longer there. The lion had fetched them away. We followed again, but to my unspeakable disappointment with the same result as in the morning. I managed this time, however, to get near the lion through the brushwood, but he immediately took to flight again—

when only a few yards from me, though hidden by bushes. Perhaps he is still at large in this same locality!

Lions—generally several of them together—killed my decoys on several occasions without themselves getting caught. I once surprised a lion and two lionesses at such a meal in the Njiri marshes, in June 1903. Unfortunately the animals became aware of my approach, and now began just such a chase as I had already successfully undertaken on January 25, 1897.[1]

I was able by degrees to gain on the satiated animals. A wonderful memory that! Clear morning light, a sharp breeze from over the swamps, the yellowish velt with its whitish incrustation of salt—a few bushes and groups of trees—and ever before me the lions, beating their reluctant retreat, now clearly visible, now almost out of sight.

I try a shot. But they are too far—it is no use. Puffing and panting, I feel my face glow and my heart beat with my exertions. At length one lioness stops and glances in my direction. I shoot, and imagine I have missed her. All three rapidly disappear in a morass near at hand. All my efforts seem to have been in vain. . . . Eight days later, however, I bag the lioness, and find that my ball has struck her right through the thigh.

It may happen that a lion caught in a trap gets off with the iron attached to him, and covers vast stretches of country. The pursuer has then an exciting time of it. If the animal passes through a fairly open district the issue is probably successful. But I have sometimes been obliged

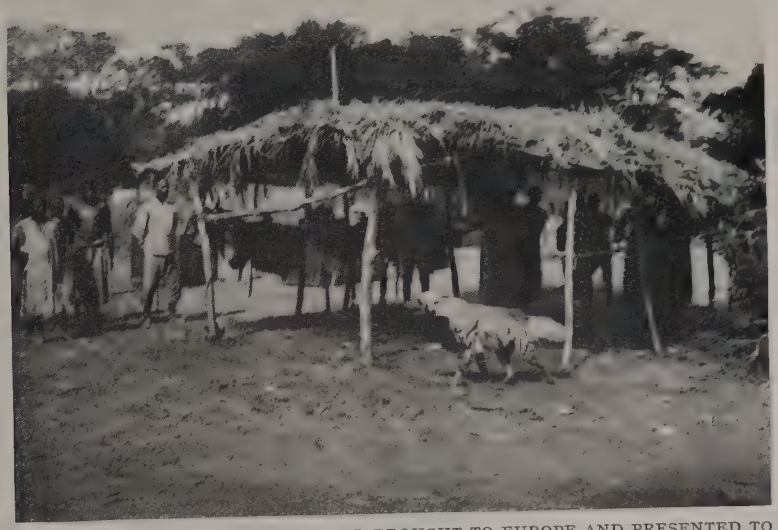
[1] Herr Niedieck also underwent a similar experience. See his book *Mit der Büchse in fünf Weltteilen*, and my own *With Flashlight and Rifle*.

C. G. Schillings, phot.

CARRYING A LIVE HYENA BACK TO CAMP.

to wade through a morass of reeds for hours at a stretch. The hunter should remember that the irons may have gripped the lion's paw in such a way that he may be able to shake them off with a powerful effort. Then the tables may easily be turned, and the lion may clasp the hunter, never to let him go again.

On another occasion I caught two full-grown lions in



MY HYENA, THE ONE I AFTERWARDS BROUGHT TO EUROPE AND PRESENTED TO THE BERLIN ZOOLOGICAL GARDENS. IT WAS CHAINED UP IN CAMP.

one night. They had roamed about quite near my camp night after night. They had frightened my people, and had been seen by the night sentinels; but in the daytime no one had been able to catch a glimpse of them. At last one night a sick ass, that had been placed as a bait, was torn away. The trail of the heavy irons led, after much turning and twisting, to a reedy swamp. Here it

was impossible to follow the tracks further. Several hours passed before I succeeded finally in finding first one lion and then the other. To kill them was no easy matter. I could hear the clanking of the chains where they were moving about, but I must see them before I could take effective aim. Meanwhile one of the lions was making frantic efforts to free himself. Supposing the irons were to give way! But these efforts were followed by moments of quiet and watching. How the beasts growled!

I cannot agree with those who condemn indiscriminately the trapping of lions. Of course, it must be done for a good purpose. I should not have been able to present the Imperial Natural History Museum in Berlin with such beautiful and typical lions' skins had I not had recourse to these traps.

A lion story with a droll ending came to me from Bagamoÿo. There a lion had made itself very obnoxious, and some Europeans determined to trap it. The trap was soon set, and a young lion fell into it. Several men armed to the teeth approached the place, to put an end to the captive with powder and shot. I cannot now exactly remember what happened next, but on the attempt of the lion to free itself from the trap the riflemen took to their heels and plunged into a pond. According to one version, the lion turned out afterwards to be only a hyena!

At one time there was a perfect plague of lions near the coast towns—Mikindani, for instance. Hungry lions attacked the townsfolk on many occasions, and even poked their heads inside the doors of the dwellings.

C. G. Sc illings, phot.

MASAI MAKING GAME OF A HYENA WHICH HAD ATTACKED THEIR KRAAL AND WHICH I HAD TRAPPED AT THEIR REQUEST. THEY KILLED IT AT LAST WITH A SINGLE SPEAR-STAB THROUGH THE HEART.

The extermination of wild life has been almost as great a disaster to the lions as to the bushmen of South Africa. Extermination awaits bushman and lion in their turn—not through hunger alone.

I was more fortunate in my attempt to get a fine example of the striped hyena (*Hyena schillingsi*, Mtsch.), which I had previously discovered, and in bringing it to Germany, where I presented it to the Berlin Zoological Gardens. On page 501 is to be seen a picture of one of this species caught in a trap. Orgeich, my plucky assistant, had armed himself with a big cudgel, for use in the case of the beast attacking him, but never lost his equanimity, and smoked his indispensable and inseparable pipe the whole time! Another illustration is of a hyena which was confined in the camp. This fine specimen, an old female, was very difficult to take to the coast. Something like forty bearers were needed to transport the heavy iron apparatus with its inmate as far as Tanga. This representative of its species was one of the first brought alive to Europe, and lived for several years in the Berlin Zoological Gardens.

It is less troublesome to obtain possession of smaller beasts of prey. Thus I kept three jackals (*Thos. schmidti*, Noack) in my camp until they became quite reconciled to their fate. It is very interesting to study the various characteristics of animals at such times. Some adapt themselves very easily to their altered circumstances; others of the same species do so only after a long struggle. The study of animal character can be carried on very well under the favourable conditions of camp life in the wild.

Although grown jackals may be fairly easily brought over to Europe, we had great difficulty with members of the more noble feline race, and above all with the King of Beasts himself. I learnt by experience that lynxes and wild cats were only to be tamed with great difficulty, and I once lost a captive lynx very suddenly in spite of every care.

These things are not so simple. This is why it is not yet possible to bring many of the most charming and most interesting members of the African animal world to Europe. I much wish that it were possible to bring full-grown lions over. I would far rather see one or two of them in all their native wildness and majesty than a whole troop of home-reared and almost domesticated specimens.

But the hours I devoted to my own attempts in this direction were not spent in vain. They were memorable hours, full of splendid excitement.

A FEW SPECIMENS OF ELEPHANT-TUSKS SECURED BY THE EMISSARIES OF DEUSS & CO., IN PORTUGUESE EAST AFRICA.

XII

A Dying Race of Giants

EVERY one who knows Equatorial East Africa will bear me out in saying that it is easier nowadays to kill fifty rhinoceroses than a single bull-elephant carrying tusks weighing upwards of a couple of hundred pounds.

There are only a few survivors left of this world-old race of giants. Many species, probably, have disappeared without leaving a single trace behind. The block granite sarcophagi on the Field of the Dead in Sakkarah in Egypt, dating from 3,500 years ago, are memorials (each weighing some 64 tons) of the sacred bulls of Apis: the mightiest monument ever raised by man to beast. Bulls were sacred to Ptah, the God of Memphis, and their gravestones—which Mariette, for instance, brought to light in 1851—yield striking evidence

of the pomp attached to the cult of animals in those days of old.

But no monument has been raised to the African elephants that have been slaughtered by millions in the last hundred years. Save for some of the huge tusks for which they were killed, there will be scarcely a trace of them in the days to come, when their Indian cousins—the sacred white elephants—may perhaps still be revered.

John Hanning Speke, who with his fellow-countryman Grant discovered the Victoria Nyanza, found elephant herds grazing quite peacefully on its banks. The animals, nowadays so wild, hardly took any notice when some of their number were killed or wounded : they merely passed a little farther on and returned to their grazing.

The same might be said of the Upper Nile swamps in the land of the Dinkas, in English territory, where, thanks to specially favourable conditions, the English have been successfully preserving the elephants. Also in the Knysna forests of Cape Colony some herds of elephants have been preserved by strict protective laws during the last eighty years or so. Experience with Indian elephants has proved that when protected the sagacious beasts are not so shy and wild as is generally the case with those of Africa. For the latter have become, especially the full-grown and experienced specimens, the shyest of creatures, and therefore the most difficult to study.

Should any one differ from me as to this, I would beg him to substantiate his opinion by the help of photo-

Photographed at Zanzibar.

THE HEAVIEST ELEPHANTS' TUSKS EVER RECORDED IN THE ANNALS OF EAST AFRICAN TRADE. THEY WEIGHED 450 POUNDS. I TRIED IN VAIN TO SECURE THEM FOR A GERMAN MUSEUM. THEY WERE BOUGHT FOR AMERICA.

graphs, taken in the wilderness, of elephants which have not been shot at—photographs depicting for us the African elephant in its native wilds. When he does, I shall "give him best"!

The elephant is no longer to be found anywhere in its original numbers. It is found most frequently in the desert places between Abyssinia and the Nile and the Galla country, or in the inaccessible parts of the Congo, on the Albert Nyanza, and in the hinterlands of Nigeria and the Gold Coast. But in the vicinity of the Victoria Nyanza things have changed greatly. Richard Kandt tells us that a single elephant-hunter, a Dane, who afterwards succumbed to the climate, alone slaughtered hundreds in the course of years.

According to experts in this field of knowledge, some of the huge animals of prehistoric days disappeared in a quite brief space of time from the earth's surface. But we cannot explain why beasts so well qualified to defend themselves should so speedily cease to exist. However that may be, the fate of the still existing African elephant appears to me tragic. At one time elephants of different kinds dwelt in our own country.[1] Remains of the closely related mammoth, with its long hair adapted to a northern climate, are sometimes excavated from the ice in Siberia. Thus we obtain information about its kind of food, for remnants of food well preserved by the intense

[1] Little elephants only a yard high used to inhabit Malta, and there still lives, according to Hagenbeck, the experienced zoologist of Hamburg, a dwarf species of elephant in yet unexplored districts of West Africa.

cold have been found between the teeth and in the stomach—remnants which botanists have been able to identify.

By a singular coincidence, the mammoth remains preserved in the ice have been found just at a time when the craze for slaughtering their African relations has reached its climax, and when by means of arms that deal out death at great, and therefore safe distances, the work of annihilation is all too rapidly progressing. The scientific equipment of mankind is so nearly perfect that we are able to make the huge ice-bound mammoths, which have perhaps been reposing in their cold grave for thousands of years, speak for themselves. And it can be proved by means of the so-called "physiological blood-proof" that the frozen blood of the Siberian mammoths shows its kinship with the Indian and African elephant!

It is strange to reflect that mankind, having attained to its present condition of enlightenment, should yet have designs upon the last survivors of this African race of giants—and chiefly in the interests of a game! For the ivory is chiefly required to make billiard balls! Is it not possible to contrive some substitute in these days when nothing seems beyond the power of science?

A. H. Neumann, a well-known English hunter, says that some years ago it was already too late to reap a good ivory harvest in Equatorial Africa or in Mombasa. He had to seek farther afield in the far-lying districts between the Indian Ocean and the Upper Nile, where he obtained about £5,000 worth of ivory during one hunting expedition.

A STORE OF ELEPHANTS' TUSKS IN ONE OF THE WORKROOMS OF THE IMPORTANT IVORY FACTORY OF A. MEYER AT HAMBURG. IT SHOULD BE BORNE IN MIND THAT THERE ARE A NUMBER OF OTHER SUCH FACTORIES ON THE CONTINENT AND IN AMERICA.

Meanwhile powder and shot are at work day and night in the Dark Continent. It is not the white man himself who does most of the work of destruction ; it is the native who obtains the greater part of the ivory used in commerce. Two subjects of Manga Bell, for instance, killed a short time back, in the space of a year and a half, elephants enough to provide one hundred and thirty-nine large tusks for their chief! There is no way of changing matters except by completely disarming the African natives. Unless this is done, in a very short time the elephant will only be found in the most inaccessible and unhealthy districts. It does not much matter whether this comes about in a single decade or in several. What are thirty or forty or fifty years, in comparison with the endless ages that have gone to the evolution of these wonderful animals ? It is remarkable, too, that in spite of all the hundreds of African elephants which are being killed, not a single museum in the whole world possesses one of the gigantic male elephants which were once so numerous, but which are now so rarely to be met with. Accompanying this chapter is a photograph of the heaviest elephant-tusks which have ever reached the coast from the interior. The two tusks together weigh about 450 pounds. One can form some idea of the size of the elephant which carried them ! I was unfortunately unable to obtain these tusks for Germany, although they were taken from German Africa. They were sent to America, and sold for nearly £1,000.

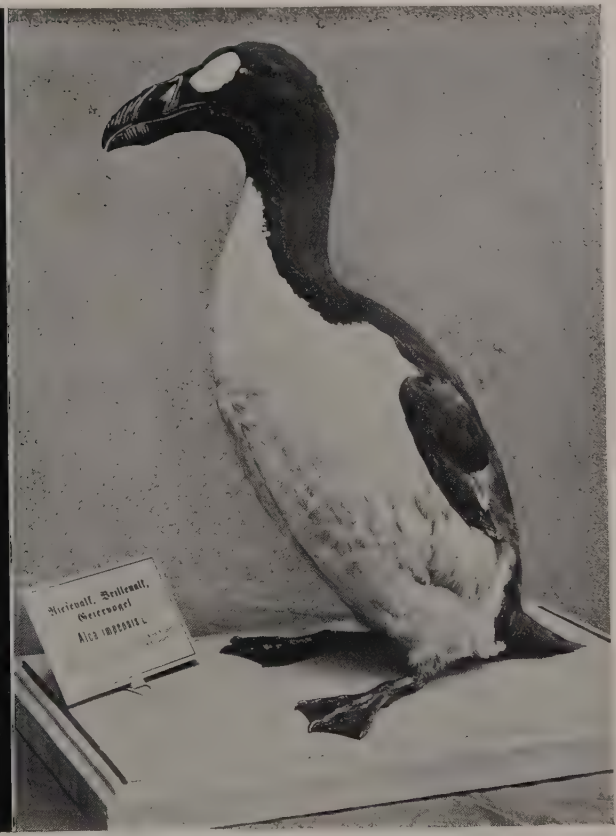
I should like the reader to note, also, the illustration showing a room in an ivory factory. The number of

tusks there visible will give an approximate notion of the tremendous slaughter which is being carried on.

The price of ivory has been rising gradually, and is now ten times what it was some forty years ago in the Sudan, according to Brehm's statistics. In Morgen's time one could buy a fifty-pound tusk in the Cameroons for some stuff worth about sevenpence. In the last century or two the price of ivory has risen commensurately with that of all other such wares. Nowadays a sum varying from £300 to £400 may be obtained for the egg of the Great Auk, which became extinct less than half a century ago: whilst a stuffed specimen of the bird itself is worth at least £1,000. What will be the price of such things in years to come!

In the light of these remarks the reader will easily understand how greatly I prize the photographs which I secured of two huge old bull-elephants in friendly company with a bull-giraffe, and which are here reproduced. It will be difficult, if not indeed impossible, ever again to photograph such mighty "tuskers" in company with giraffes. In the year 1863 Brehm wrote that no true picture existed of the real African elephant in its own actual haunts. The fact brought to light by these pictures is both new and surprising, especially for the expert, who hitherto has been inclined to believe that giraffes were dwellers on the velt and accustomed to fight shy of the damp forests. That they should remain in such a region in company with elephants for weeks at a time was something hitherto unheard of. I do not know how to express my delight at being able after long hours of

AN AUK'S EGG, ABOUT THREE-FIFTHS OF ACTUAL SIZE. AUK'S EGGS COME INTO THE MARKET IN ENGLAND FROM TIME TO TIME AND FETCH AS MUCH AS £300 APIECE.



THE SPECIMEN OF THE AUK PRESERVED IN THE BERLIN NATURAL HISTORY MUSEUM. IT WOULD BE WORTH AT LEAST £1,000 IF OFFERED FOR SALE.

(REPRODUCED HERE BY KIND PERMISSION OF THE DIRECTOR OF THE MUSEUM, DR. BRAUER VON FRL. ELFRIEDE ZIMMERMANN.)

patient waiting to sight this rare conjunction of animals from my place of observation either with a Goerz-Trizeder or with the naked eye, but only for a few seconds at a time, because of the heavy showers of rain which kept falling. How disappointing and mortifying it was to find oneself left in the lurch by the sun—and just immediately under the Equator, where one had a right to it! What I had so often experienced in my photographic experiments in the forests by the Rufu River—that is, the want of sunlight for days together—now made me almost desperate. At any moment the little gathering of animals might break up, in which case I should never be able to get a photographic record of the strange friendship. Since the publication of my first work I have often been asked to give some further particulars about this matter. Therefore, perhaps these details, supported by photographs, will not be unacceptable to my readers.

I candidly admit that had I suddenly come upon these great bull-elephants in the jungle in years gone by I could not have resisted killing them. But I have gradually learned to restrain myself in this respect. It would have been a fine sensation from the sportsman's standpoint, and would besides have brought in a round sum of perhaps £500; but what was all that in comparison with the securing of one single authentic photograph which would afford irrefutable proof of so surprising a fact?

The western spurs of the great Kilimanjaro range end somewhat abruptly in a high table-land, which is grass-grown and covered in patches with sweet-smelling acacias. This undulating velt-region gradually slopes down until in

its lowest parts the waters collect and form the western Njiri marshes, which at some seasons of the year are almost dry. Volcanic hills arise here and there on the plain, from whose summits one can obtain a wide view. One of the most prominent of these hills has a cavity at its summit. It is evidently the crater of an extinct volcano which is filled with water, like the volcanic lakes of my native Eifel district. A thicket begins not far from this hill, and gradually extends until it merges into the forest beyond. The burning sun has dried up all the grass up to the edge of the thicket. There is so little rain here that the poor Xerophites are the only exception that can stand the drought. Only on the inner walls of the steep crater do bushes and shrubs grow, for these are only exposed at midday to the sun's heat.

Thus a cool moisture pervades this hollow except during the very hottest season. Paths, trodden down by crowds of game, lead to the shining mirror of the little lake. It used to be the haunt of beasts of prey, and the smaller animals would probably seek drinking-places miles distant rather than come to this grim declivity. There is, however, a kind of road leading to the summit of this hill, a very uneven road, wide at first, then gradually narrower and narrower, which had become almost impassable with grass and brushwood when I made my way up. This road was trodden by the cattle herds of the Masai. It may be that rhinoceroses and elephants were the original makers of it before the warlike shepherds began to lead their thirsty cattle to this secluded lake. Be this as it may, my Masai friends assured me that they

C. G. Schillings, phot.

A THICKET, HUNG WITH LICHENS, MUCH FREQUENTED BY ELEPHANTS AND SOMETIMES ALMOST IMPENETRABLE TO MAN.

brought their herds here time out of mind until the rinderpest devastated them.

For weeks I had had natives on the look-out for elephants. They could only tell me, however, of small herds composed of cows and young bulls, and that was not good enough from the point of view of either sportsman or photographer. However, I made several excursions round the Kilepo Hill from my camp, never taking more than a few men with me—it so often happens that one's followers spoil the chase, perhaps quite frustrate it. This is well known to natives and experienced elephant-hunters.

I soon became familiar with the district and its vegetation. For hours I followed paths which led through thick undergrowth, and I had some unpleasant encounters with rhinoceroses. I knew well that the neighbourhood of the hills, with its tall impenetrable growth, was a most likely one for astute and cautious bull-elephants to haunt.

Hunting elephants in this fashion, day after day, with only a few followers, is a delightful experience. It happens, perhaps, that one has to pass the night in the forest under the free vault of heaven, with the branches of a huge tree as shelter. The faint glow of the camp-fire fades and flickers, producing weird effects in the network of the foliage. How quickly one falls victim to atavistic terrors of the night! Terrors of what? Of the "pepo ya miti," the spirit of the woods, or of some other mysterious sprite? No, of wild animals—the same kind of fear that little children have in the dark of something unknown, dangerous and threatening. My followers betake themselves to their

slumbers with indifference, for they have little concern for probable dangers. But the imaginative European is on the look-out for peril—the thought of it holds and fascinates him. . . . Somewhere in the distance, perhaps, the heavens are illuminated with a bright light. Far, far away a conflagration is raging, devastating miles upon miles of the vale below. The sky reflects the light, which blazes up now purple, now scarlet! Often it will last for days and nights, nay weeks, whole table-lands being in flames and acting as giant beacons to light up the landscape! . . . My thoughts would turn towards the bonfires which in Germany of old flashed their message across the land—news, perhaps, of the burial of some great prince. . . . So, now, it seemed to me that those distant flames told of the last moments of some monarch of the wild.

At last I received good news. A huge bull-elephant had been seen for a few minutes in the early morning hours in the vicinity of the Kilepo Hill. This overjoyed me, for I was quite certain that in a few days now we should meet them above on the hill.

I left my camp to the care of the greater part of my caravan, but sent a good many of my men back into the inhabited districts of the northern Kilimanjaro to get fresh provisions from Useri. I myself went about a day's journey up Kilepo Hill, accompanied by a few of my men, resolved to get a picture *coûte que coûte*.

It was characteristic of my scouts that they could only give me details about elephants. As often as I asked them about other game I could get nothing out of them,

for what were giraffes, buffaloes, and rhinoceroses to them, and what interest could they have in such worthless creatures! The whole mind of the natives has been for many years past directed by us Europeans upon ivory. Native hunters in scantily populated districts dream and think only of "jumbe"—ivory, and always more ivory, as the Esquimaux yearns for seal blubber and oil and the European for gold, gold, gold! In these parts giraffes and rhinoceroses count for nothing in comparison with the elephant—the native thinks no more of them than one of our own mountaineers would think of a rabbit or a hare. Only those who have seen this for themselves can realise how quickly one gets accustomed to the point of view! In the gameless and populous coast districts the appearance of a dwarf antelope or of a bustard counts for a good deal, and holds out promise to the sportsman of other such game—waterbuck, perhaps. I have read in one of the coast newspapers the interesting news that Mr. So and So was fortunate enough to kill a bustard and an antelope. That certainly was quite good luck, for you may search long in populous districts and find nothing. As you penetrate into the wilder districts conditions change rapidly, and after weeks and months of marching in the interior you get accustomed to expecting only the biggest of big game. The other animals become so numerous that the sight of them no longer quickens the pulse.

I have already remarked that elephants are much less cautious by night than by day. The very early morning hours are the best for sighting elephants, before they retire into their forest fastnesses to escape the burning

rays of the sun. But as at this time of the year the sun hardly ever penetrated the thick bank of clouds, there was a chance of seeing the elephants at a later hour and in the bush. So every morning either I or one of my scouts was posted on one of the hills—Kilepo especially—to keep a sharp look-out. It needed three hours in the dark and two in the daylight to get up the hill. It was not a pleasant climb. We were always drenched to the skin by the wet grass and bushes, and it was impossible to light a fire to dry ourselves, for the animals would certainly have scented it. We had to stay there in our wet clothes, hour after hour, watching most carefully and making the utmost of the rare moments when the mist rolled away in the valley and enabled us to peer into the thickets. It may seem surprising that we should have found so much difficulty in sighting the elephants, but one must remember that they emerge from their mud-baths with a coating that harmonises perfectly with the tree-trunks and the general environment, and are therefore hard to descry. Besides, the conditions of light in the tropics are very different from what we are accustomed to in our own northern clime, and are very deceptive.

When fortune was kind I could just catch a glimpse during a brief spell of sunshine of a gigantic elephant's form in the deep valley beneath. But only for a few instants. The next moment there was nothing to be seen save long vistas of damp green plants and trees. The deep rain-channels stood out clear and small in the landscape from where I stood. The mightiest trees looked like bushes; the hundred-feet-high trunks of

C. G. Schillings, phot.

A VELT FIRE. THE BONES OF AN ELEPHANT SOON TO BECOME FOOD FOR THE FLAMES.

C. G. Schillings, phot.

A VELT FIRE.

decayed trees which stood up out of the undergrowth here and there looked like small stakes. In the ever-changing light one loses all sense of the vastness of things and distances.

For once the mist rolls off rapidly; a gust of wind drives away the clouds. The sun breaks through. Look! there is a whole herd of elephants below us in the valley! But in another second the impenetrable forest of trees screens them from my camera. At last they become clearly visible again, and I manage to photograph two cow-elephants in the distance. The sun vanishes again now, and an hour later I have at last the whole herd clearly before me in the hollow. How the little calves cling to their mothers! How quietly the massive beasts move about, now disappearing into the gullies, now reappearing and climbing up the hillside with a sureness of foot that makes them seem more like automatons than animals. Every now and again the ruddy earth-coloured backs emerge from the mass of foliage. A wonderful and moving picture! For I know full well that the gigantic mothers are caring for their children and protecting them from the human fiend who seeks to destroy them with pitfalls, poisoned arrows, or death-dealing guns. How cautiously they all move, scenting the wind with uplifted trunks, and keeping a look-out for pitfalls! Every movement shows careful foresight; the gigantic old leaders have evidently been through some dire experiences.

Suddenly a warning cry rings out. Immediately the whole herd disappears noiselessly into the higher rain-

channels of the hill—the "Subugo woods" of the Wandorobo hunters.

Had the elephants not got these places of refuge to fly to they would have died out long ago! This is the only means by which they are still able to exist in Africa. I feel how difficult it is to depict accurately the constant warfare that is going on between man and beast, and can only give others a vague idea of what it is like. Many secrets of the life and fate and the speedy annihilation of the African elephants will sink into the grave with the last commercial elephant-hunters. And once again civilisation will have done away with an entire species in the course of a single century. The question as to how far this was necessary will provide ample material for pamphlets and discussions in times to come.

When one knows the "subugo," however, one understands how it has been possible for elephants in South Africa to have held out so long in the Knysna and Zitzikama forests until European hunters began to go after them with rifles in expert fashion. Fritsch visited the Knysna forests in 1863. "It is easy," he says, "to understand how elephants have managed to remain in their forests for weeks together before one of their number has fallen, even when hundreds of men have been after them. There are spots in these forests—regular islands completely surrounded by water—where they take refuge, and where no one can get at them."

Of course, Fritsch speaks of a time when the art of shooting was in its infancy. One must not forget that

C. G. Schillings, phot.

AN OLD ACACIA TREE.

nowadays ruthless marksmen will reach the mighty beasts even in these islands of refuge—marksmen who shoot at a venture with small-calibre rifles, and who find the dead elephant later somewhere in the neighbourhood, with vultures congregated round the corpse.[1]

Now perhaps I may have to wait in vain for hours, days, and even weeks! Some mornings there is absolutely nothing to be seen—the animals have gone down to the lake to drink, or have taken refuge in one of the little morasses at the foot of the hill. Judging by their nocturnal wanderings it seems as if they must have other accessible drinking-places in the vicinity. A search for these places, however, is not to be thought of. If I were to penetrate to these haunts they would immediately note my footsteps and take to flight for months, perhaps, putting miles between themselves and their would-be photographer.

For to-day, at any rate, all is over. The sun only breaks through the heavy masses of cloud for a few minutes at a time, and great sombre palls of mist hang over the forests, constantly changing from one shape to another.

To obtain a picture by means of the telephoto-lens did not seem at all feasible. But a photo of bull-elephants and giraffes together!—so long as there was the faintest chance of it I would not lose heart. It was not easy, but I *must* succeed! So, wet through and perishing with

[1] Experienced German hunters make a special plea for the use of rifles of heavier calibre. Many English hunters are of the same opinion.

cold, I wandered every morning through the tall grass to the top of the hill and waited and waited. . . .

The elephants seemed to have completely disappeared ; no matter how far I extended my daily excursions, they were nowhere to be seen. At length I came across a fairly big herd, but they had taken up their stand in such an impenetrable thicket that it was quite impossible to sight them. After much creeping and crawling through the elephant and rhinoceros paths in the undergrowth I managed to get just for a few minutes a faint glimpse of the vague outline of single animals, but so indistinct that it was impossible to determine their age, size, or sex. In East Africa elephants are generally seen under these unfavourable conditions. Very seldom does one come upon a good male tusk-bearing specimen, as well-meaning but inexperienced persons, such as I myself was at one time, would desire.

There is something very exciting and stimulating in coming face to face with these gigantic creatures in the thick undergrowth. All one's nerves are strained to see or hear the faintest indication of the whereabouts of the herd ; the sultry air, the dense tangle through which we have to move, and which hinders every step, combine to excite us. We can only see a few paces around. The strong scent of elephant stimulates us. The snapping and creaking of branches and twigs, the noises made by the beasts themselves, especially the shrill cry of warning given out from time to time by one of the herd—all add to the tension. The clanging, pealing sound of this cry has something particularly weird in it in the

C. G. Schillings, phot.

THE TWO ELEPHANTS.

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C. G. Schillings, phot.

THE TUSKS OF THE ELEPHANTS SEEMED EVEN LARGER THAN THEY REALLY WERE, AND OUT OF ALL PROPORTION TO THE SIZE OF THE ELEPHANTS, THOUGH THESE WERE EXCEPTIONALLY BIG BEASTS, NEARLY 12 FEET IN HEIGHT. THE GIRAFFE COMES OUT CURIOUSLY IN THIS PICTURE, RIGHT AT THE BOTTOM.

[p. 549

stillness of the great forest. At such a signal the whole herd moves forward, to-day quietly without noise, and to-morrow in wild blustering flight. It is very seldom that one can catch them up on the same day, and then only after long hours of pursuit. . . . These forest sanctuaries, together with their own caution, have done more to stave off the extermination of the species than have all the sporting restrictions that have been introduced.

Every morning I returned to my post of observation on the hill. I could easily have killed one or other of the herd. But I did not wish to disturb the elephants, and I had also good reason for believing that there were no very large tusks among them. Morning after morning I returned disappointed to my camp, only to find my way back on the next day to my sentry-box at the edge of the forest on the hill. Days went by and nothing was seen save the back or head of an elephant emerging from the "subugo." This "subugo" knows well how to protect its inmates.

Every morning the same performance. At my feet the mist-mantled forest, and near me my three or four blacks, to whom my reluctance to shoot the elephants and my preoccupation with my camera were alike inexplicable. Whenever the clouds rolled away over the woods and valley it was necessary to keep the strictest watch. Then I discovered smaller herds of giraffes with one or two elephants accompanying them. But this would be for a few seconds only. The heavy banks of cloud closed to again. A beautiful large dove (*Columba aquatrix*) flew about noisily, and like our ringdove, made its love-flights round about the hill, and cooed its deep notes close by. Down below

in the valley echoed the beautiful, resonant, melancholy cry of the great grey shrike; cock and hen birds answered one another in such fashion that the call seemed to come from only one bird. There was no other living thing to see or hear.

But now! At last! I shall never forget how suddenly in one of the brilliant bursts of sunshine the mighty white tusks of two bull-elephants shone out in the hollow so dazzlingly white that one must have beheld them to understand their extraordinary effect, seen thus against that impressive background. Close by was a bull-giraffe. Vividly standing out from the landscape, they would have baffled any artist trying to put them on the canvas. I understood then why A. H. Neumann, one of the most skilful English elephant-hunters, so often remarked on the overwhelming impression he received from these snow-white, shining elephant-tusks. So white do they come out in the photographs that the prints look as though they had been touched up. But these astonishing pictures are as free from any such tampering as are all the rest of my studies of animal life.[1]

Before I succeeded in getting my first picture of the elephants and giraffes consorting together, I was much tempted to kill the two huge bull-elephants. They came so often close to the foot of my hill that I had plenty of opportunities of killing them without over-much danger to

[1] The *raison d'être* of these powerful weapons of the African elephant is a difficult question. Why did the extinct mammoth carry such very different tusks, curving upwards? Why has the Indian elephant such small tusks, and the Ceylon elephant hardly any at all, whilst the African's are so huge and heavy?

C. G. Schillings, phot.

THE TWO ELEPHANTS.

C. G. Schillings, phot.

A QUAINT COMPANIONSHIP—ELEPHANT AND GIRAFFE. THE GIRAFFE MAY BE JUST MADE OUT IN THE FOREGROUND, AT THE BOTTOM OF THE PHOTOGRAPH.

myself or my men. As I caught sight of that rare trio I must honestly confess I had a strong desire to shoot. This desire gave way, however, before my still keener wish to photograph them. The temptation to use my rifle came from the thought of the satisfaction with which I should see them placed in some museum. It might be possible to prepare their skins here on this very spot. In short, I had a hard struggle with myself.

But the wish to secure the photographs triumphed. No museum in the world had ever had such a picture. That thought was conclusive.

The accompanying illustrations give both the colossal beasts in different attitudes. The giraffe stands quite quiet, intent on its own safety, or gazes curiously at its companions. What a contrast there is between the massive elephants and the slender, towering creature whose colouring harmonises so entirely with its surroundings! Wherever you see giraffes they always blend with their background. They obey the same laws as leopards in this respect, and leopards are the best samples of the "mimicry" of protective colouring.

What long periods of hunger must have gone to the formation of the giraffe's neck!

It would seem as though these survivors of two prehistoric species had come together thus, at a turning-point in the history of their kind, for the special purpose of introducing themselves by means of their photographs to millions of people. I owe it to an extraordinary piece of good fortune that I was able to take another picture of them during a second burst of sunshine which lit up the forest.

It is the event of a lifetime to have been the witness of so strange and unsuspected a condition of things as this friendship between two such dissimilar animals. The extent of my good luck may be estimated from the fact that the famous traveller Le Vaillant, more than seventy years ago, wished so ardently to see a giraffe in its natural surroundings, *if only once*, that he went to South Africa for that purpose, and that, having achieved it on a single occasion, as he relates in his work, he was quite overjoyed. Although I was aware that herds of giraffes frequented this region without fear of the elephants, it was a complete revelation to me to find an old bull-giraffe living in perfect harmony for days together with two elephants for the sake of mutual protection. I can only account for this strange alliance by the need for such mutual protection. The giraffe is accustomed to use its eyes to assure itself of its safety, whilst elephants scent the breeze with their trunks, raised like the letter S for the purpose. In these valleys the direction of the wind varies very often. The struggle for existence is here very vividly brought before us. How often in the course of centuries must similar meetings have occurred in Africa and in other parts of the world, before I was able to record this observation for the first time? These pictures are a good instance of the value of photography as a means of getting and giving information in regard to wild life.

Kilepo Hill will always stand out vividly in my memory. Elephants may still climb up to the small still lake shut in by the wall-like hillsides, as they have done for ages, to quench their thirst at its refreshing waters. For hundreds

of years the Masai, for the sake of their cattle herds, contested with them the rights of this drinking-place. Then the white man came and the Masai vanished, and again the elephants found their way to the Kilepo valley. Later, white settlers came—Boers, ruthless in their attitude towards wild life—and took up their abode in the Kilimanjaro region, The day cannot now be far distant when the last of the elephants will have gone from the heart of Kilepo Hill. But these two, long since killed, no doubt, will continue to live on in my pictures for many a year to come.

THE YOUNG LION THAT I MANAGED TO CAPTURE AND BRING ALIVE INTO CAMP.

A STUDY IN PROTECTIVE "MIMICRY."

XIII

A Vanishing Feature of the Velt

"WHEN men and beasts first emerged from the tree called 'Omumborombongo,' all was dark. Then a Damara lit a fire, and zebras, gnus, and giraffes sprang frightened away, whilst oxen, sheep, and dogs clustered fearlessly together." So Fritsch told us forty years ago, from the ancient folk-lore of the Ova-Herero, one of the most interesting tribes of South-West Africa.

If the photographing of wild life is only to be achieved when conditions are favourable, and is beset with peculiar difficulties in the wilderness of Equatorial Africa, one might at least suppose that such huge creatures as elephants, rhinoceroses, and giraffes could be got successfully upon the "plate." But they "spring frightened away"! The cunning, the caution, and the shyness of these animals make all attempts at photographing them very troublesome

C. G. Schillings, phot.

A GIRAFFE IN FULL FLIGHT.

C. G. Schillings, phot.

A GIRAFFE BULL IN AN ACACIA GROVE.

indeed; for to secure a good result you need plenty of sunlight, besides the absence of trees between you and the desired object. And when everything seems to favour you, there is sure to be something wanting—very probably the camera itself. Fortune favours the photographer at sudden and unexpected moments, and then only for a very short while. One instant too late, and you may have to wait weeks, months, even years for your next opportunity. I would give nine-tenths of the photos I have taken of animal life for some half-dozen others which I was unable to take because I did not have my camera to hand just at the right moment. Thus it was with the photographing of the three lions I killed on January 25, 1897, and of the four others I saw on the same day, on the then almost unknown Athi plains in the Wakikuju country. Also with that great herd of elephants which so nearly did for me, and which I should have dearly liked to photograph just as they began their onrush. (I have told the story in *With Flashlight and Rifle*.) I remember, too, the sight of a giraffe herd of forty-five head which I came across on November 4, 1897,[1] about two days' journey north-west of the Kilimanjaro. The hunter of to-day would travel over the velt for a very long while before meeting with anything similar. In earlier days immense numbers of long-necked giraffe-like creatures, now extinct, lived on the velt; the rare Okapi, that was discovered in the Central African forests a short time ago, has aroused the interest of zoologists as being a relative of that extinct species.

Within the last hundred or even fifty years, the

[1] On that occasion I had not at hand a telephoto-lens of sufficient range.

giraffe itself was to be found in large herds in many parts of Africa. The first giraffe of which we know appeared in the Roman arena. About two hundred years ago we are told some specimens were brought over to Europe, and caused much astonishment. The Nubian menageries some years ago brought a goodly number of the strange beasts to our zoological gardens.[1] But how many people have seen giraffes in their native haunts? When, in 1896, I saw them thus for the first time, I realised how thin and wretched our captive specimens are by the side of the splendid creatures of the velt. Le Vaillant, in his accounts of his travels in Cape Colony and the country known to-day as German South-West Africa, gives a spirited description of these animals, and tells how after much labour and trouble he managed to take a carefully dried skin to the coast and to send it to Germany. That was seventy years ago. Since then many Europeans have seen giraffes, but they have told us very little about them. The German explorer Dr. Richard Böhm has given us wonderfully accurate information about them and their ways. But the beautiful water-colours so excellently drawn by a hand so soon to be disabled in Africa, were lost in that dreadful conflagration in which his hunting-box on the peaceful Wala River and most of his diaries were destroyed. Dr. Richard Kandt, whilst on his expeditions in search of the sources of the Nile, found the charred remains of the hut. "Ubi sunt, qui ante nos in mundo fuere?"

Zoological experts tell us that there are several species

[1] The well-known naturalist, Hagenbeck, remembers the immense numbers of giraffes which were bagged in the Sudan some thirty years ago.

C. G. Schillings, phot.

A SUCCESSFUL PHOTOGRAPH, TAKEN AFTER A LONG PURSUIT AND MANY FAILURES.

C. G. Schillings, phot.

TELEPHOTO STUDIES OF GIRAFFES (*GIRAFFA SCHILLINGSI*, Mtsch.).

of giraffe inhabiting separate zoological regions. In the districts I traversed, I came across an entirely new species. . . . Their life and habits interested me beyond measure. I often think of them still—moving about like phantoms among the thorny bushes, and in and out the sunlit woods, or standing out silhouetted against the horizon.

Though by nature peaceful, the giraffe is not defenceless —a kick from one of its immense legs, or a blow sideways with the great thick-necked head of a bull, would be quite enough to kill a mere man. But this gigantic beast, whose coat so much resembles that of the bloodthirsty tiger, leopard, and jaguar, never attacks, and only brings its forces into play for purposes of defence. It harms no man, and it has lived on the velt since time immemorial. It is the more to be deplored, therefore, that it should disappear now so quickly and so suddenly.

I have already remarked several times on the way giraffes and other African mammals harmonise in their colouring with their environment. Professor V. Schmeil has pointed out how my opinion in this respect accords with that of earlier observers.[1] The way in which giraffes mingle with their surroundings as regards not only their colour but also their form, is especially astonishing. The illustration on page 550 proves this in a striking manner, for it shows how the outlines of the giraffe correspond exactly with those of the tree close to it.

[1] Later observers questioned this fact. When I have used the word "mimicry," I have done so not in the original sense of Bates and Wallace, but as denoting the conformity of the appearance of animals with their environment.

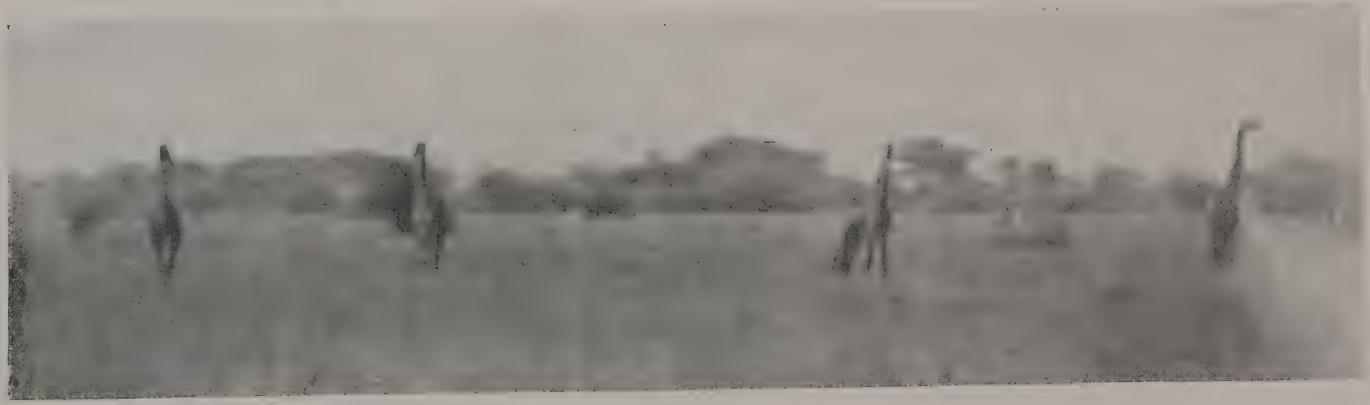
One may spend days and weeks on the velt trying to get near giraffes without result. Far away on the horizon you descry the gigantic "Twigga"—as the Waswahili call it—but every attempt to approach is in vain. Then, all of a sudden it may happen—as it did once to me near the Western Njiri marshes, Nov. 29, 1898—that a herd of giraffes passes quite near you without fear. On the occasion in question, as is so often the case, I had not my photographic apparatus at hand. I could have got some excellent pictures with quite an ordinary camera. The giraffes came towards me until within sixty paces. They then suddenly took wildly to flight. The little herd consisted of nine head: an old very dark-spotted bull, a light-spotted cow, three younger cows with a calf each, and finally a young dark-spotted bull. Orgeich and I had been able to observe the animals quietly as they stood, as if rooted to the spot, with their long necks craned forward, their eyes fixed upon us.[1] I cannot explain why the animals were so fearless on that occasion. It was a most unusual occurrence, for ordinarily giraffes manage to give the sportsman a wide berth.

Again, it may happen, especially about midday, that the hunter will sight a single giraffe or a whole herd at no very great distance. At these times, if one is endowed with good lungs and is in training, one may get close enough to the creatures before they take to flight.

[1] Some years earlier one of our best zoologists, after a long stay in the Masai uplands, had described the giraffes as "rare and almost extinct": a striking proof of the great difficulty there is in coming upon these animals.

Hauptmann Merker, phot.

GIRAFFE STUDIES.



C. G. Schillings, phot.

GIRAFFE STUDIES.

Or it may happen that you will sight giraffes about noontide sheltering under the fragrant acacia trees. I remember one occasion especially, in the neighbourhood of the Gelei volcanic hills. I had hardly penetrated for more than about a hundred and twenty paces into an acacia wood, when I suddenly saw the legs of several gigantic giraffes—their heads were hidden in the crowns of mimosa. The wind was favourable. I might within a few minutes find myself in the middle of the herd! But, a moment later, I felt the ground tremble and the huge beasts with their hard hoofs were thumping over the sun-baked ground. They crashed through the branches and fled to the next shelter of mimosa trees. Although I might easily have killed some of them, it was absolutely impossible to take a photograph. But I was at times more fortunate in snapshotting single specimens. Carefully and cautiously, I would creep forward, of course alone, leaving my people behind, until I came within about twenty paces of the giraffe. By dodging about the trees or shrubs near which it stood I have sometimes managed to obtain good pictures of the animal making off in its queer way. The utmost caution was necessary. I had to consider not only the place where the animal was but the position of the sun, and that most carefully. The possibility of photographing giraffes with the telephoto lens is very slight indeed. One's opportunities are turned to best account by the skilful use of an ordinary hand-camera.

In this way, also, I managed to get pictures of the peculiar motion of giraffes in full flight. My negatives are a proof of the comparative ease with which native

hunters may hunt giraffes with poisoned arrows. I have often met natives in possession of freshly killed giraffe flesh.

In most cases bushes and trees are a great hindrance to the taking of photographs, especially of large herds. At such times it was as good as a game of chess between the photographic sportsman and the animals. For hours I have followed them with a camera ready to snapshot, but the far-sighted beasts have always frustrated my plans. Thus passed hours, days and weeks. But good luck would come back again, and I was sometimes able to develop an excellent negative in a camp swarming with mosquitoes.

It is especially in the peculiar light attendant on the rainy season and amidst tall growths that giraffes mingle so with their surroundings. It is only when the towering forms are silhouetted against the sky that they can be clearly seen on the open velt. At midday, when the velt is shimmering with a thousand waves of light, when everything seems aglow with the dazzling sun, even the most practised eye can scarcely distinguish the outlines of single objects. By such a light the sandy-coloured oryx antelopes and the stag-like waterbuck look coal-black ; the uninitiated take zebras for donkeys—they appear so grey—and rhinoceroses resting on the velt for ant-hills. But giraffes especially mingle with the surrounding mimosa woods at this hour in such a way as only those who have seen it could believe possible.

When you see these animals in their wild state, your thoughts naturally revert to the penned-up tame specimens in zoological gardens or those preserved in museums,

C. G. Schillings, phot.

A HERD OF GIRAFFES: THE LEADER, A POWERFUL OLD BULL, IN THE FOREGROUND.

C. G. Schillings, phot.

TWO GIRAFFES OUT OF A HERD I CAME UPON IN THE VICINITY OF THE MASAI COLONY CALLED KIRARAGUA, NOW ALMOST BEREFT OF WILD LIFE OWING TO THE IMMIGRATION OF THE BOERS. THE ANIMALS MAY HERE BE SEEN IN VERY CHARACTERISTIC SURROUNDINGS, ACACIA WOODS ALTERNATING WITH WIDE EXPANSES COVERED WITH

HEAD OF A GIRAFFE (*GIRAFFA RETICULATA* De Winton), KILLED IN SOUTH SOMALILAND BY THE EXPLORER CARLO VON ERLANGER. (BY KIND PERMISSION OF THE BARONESS VON ERLANGER.)

Well do I remember that the first wild zebra I saw looked to me little like a tame specimen in a zoological garden.

The death-knell of the giraffe has tolled. This wonderful and harmless animal[1] is being completely annihilated! Fate has decreed that a somewhat near relative should be discovered in later days—namely the Okapi, which inhabits the Central African forests. It may be safely asserted that these unique animals will exist long after the complete extermination of the real giraffe. The species of giraffe, however, which has been dying out in the north and south of the African continent will be represented in the future by pictures within every man's reach. Every observation as to their habits, every correct representation obtained, every specimen preserved for exhibition is of real value. And this I would impress on every intelligent man who has the opportunity of doing any of these things out in the wild.

Professor Fritsch saw giraffes in South Africa as late as 1863. Shortly before these lines were printed he gave a glowing account of the impression they then made on him, an impression which was renewed when he saw my pictures.

Large herds of giraffes still flourish in remote districts. My friend Carlo von Erlanger, whose early death is much to be regretted, found the animals particularly timid in South Somaliland when he traversed it for the first time.

[1] The author has often heard it asserted that the giraffe does much harm to the African vegetation and therefore should be exterminated. Such assertions should be speedily and publicly denied. They are on a level with the demand for the complete extermination of African game with a view to getting rid of the tsetse-fly.

A fine stuffed specimen of these beautifully coloured giraffes is to be found in the Senckenberg Museum in Frankfort-on-Maine. An illustration gives the head of a giraffe killed by my late friend, and proves to the reader how much the two species differ—namely the South Somaliland giraffe as here depicted,[1] and that which I was the first to discover in Masailand. We have in Erlanger's diary and in this illustration the only existing information about the presence of the giraffe in South Somaliland, a region which none but my daring friend and his companions have so far traversed.

Hilgert, Carlo von Erlanger's companion, mentions the frequent presence of the South Somali giraffe, but says that they showed themselves so shy that the members of the expedition generally had to content themselves with the numerous tracks of the animals or with the sight of them in the far distance.

Meanwhile an effort is being made to save and protect what remains of the giraffe species in Africa. But there is little hope of ultimate success. I do trust, however, that a wealth of observations, illustrations, and specimens may be secured for our museums before it is too late. In this way, at least, a source of pleasure and information will be provided for future generations, and the giraffe will not share the fate of so many other rare creatures which no gold will ever give back to us.

With sad, melancholy, wondering eyes the giraffe seems to peer into the world of the present, where there is room for it no longer. Whoever has seen the expression in

[1] *Giraffa reticulata* de Winton and *Giraffa schillingsi*, Mtsch.

Hauptmann, Merker phot.

GIRAFFE STUDY.

C. G. Schillings, phot.

A TELEPHOTOGRAPH TAKEN AT A DISTANCE OF 200 PACES.

C. G. Schillings, phot.

GIRAFFA SCHILLINGSI, Mtsch.

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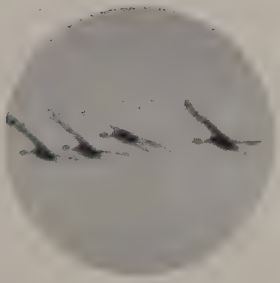
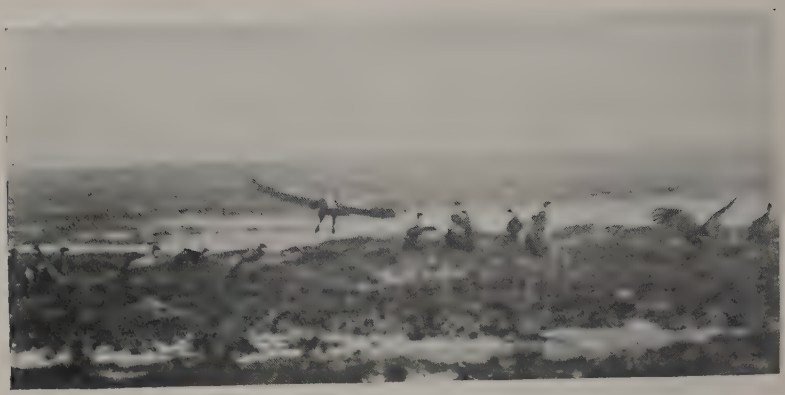
those eyes, an expression which has been immortalised by poets in song and ballad for thousands of years, will not easily forget it, any more than he will forget the strong impression made on him when he looked at the "Serafa" of the Arabs in the wilderness.

The day cannot be far distant when the beautiful eyes of the last "Twigga" will close for ever in the desert. No human skill will be able to prevent this, in spite of the progress of human knowledge and human technique. The giraffe can never enter the little circle of domesticated animals. Therefore it must go. Perhaps its eyes will close in the midst of the Elelescho jungle, thus lessening still further the fascination of that survival from the youth of the world.



CRESTED CRANES ON THE WING.



HUNGRY VULTURES IN THE VICINITY OF MY CAMP.

XIV

Camping out on the Velt

AMONG the happiest days of my life I reckon those which I spent camping out in the heart of the Nyíka.

Nearly every hour there had something fresh to arouse my interest, not only in the life of the wild animals that roamed at large all about, but also in that of the specimens which I had caught or my men had brought to me, and whose habits and ways I could observe within the enclosure of the camp. Of course our unique menagerie could not boast members of all the most attractive species of the African fauna, but it included some very rare and interesting animals which Europe has never seen. To know these one must go and live in wildest Africa and see them at home.

My camp at times was like a little kingdom. Many of my people went out for weeks together to barter for

C. G. Schillings, phot.

PITCHING CAMP WITH A VIEW TO A LONG STAY.

fruits and vegetables with agrarian tribes. With the rest, I spent my days out in the open, hunting, collecting, and observing. My zoological collection increased daily, time flew by with all the many jobs there were to be done—drying, preserving, preparing, sorting, labelling, and sending off specimens. The primitive camp life was full of interest in spite of its seeming monotony. It was like

MY TAXIDERMIST, ORGEICH, AT WORK.

ruling and ordering a little State. I thoroughly enjoyed this simple existence, in which I seemed to forget the artificial worries of civilisation and to be able to give myself up to my love for nature.

Then I learned to appreciate the natives. Of course they are not to be judged from a European standpoint as regards habits and customs, but I shall always remember

with pleasure certain strong and good characters among my followers.

Nomadic hunters—shy and suspicious as the animals they hunted—sometimes paid us passing visits, whilst the whole world of beasts and birds thronged around our "outpost of civilisation," so suddenly planted in their midst.

My goods and chattels were stowed away in a hut which I had put up myself, and which was protected from wind, rain, and sun by masses of reeds and velt grasses. This hut was of the simplest construction, but I was very proud of it. It was useful not only for protecting zoological collections from the all-pervading rays of the sun, and from rain and cold, but also from the numerous little fiends of insects against which continual warfare has to be waged. The destructive activity of ants is a constant source of annoyance to travellers and collectors; I remember how my one-time fellow-traveller Prince Johannes Löwenstein had the flag on his tent destroyed by them in a single night. In one night also these ants bit through the ticket-threads by which my specimens were classified; in one night, again, the tiny fiends destroyed the bottoms of several trunks which had been carelessly put away!

One has to wage constant warfare against destroyers of every kind.

My cow, which was very valuable to me, not only as giving milk to my people, but also for nourishing young wild animals, was penned at night-time within a thick thorn hedge. My people made themselves more or less

C. G. Schillings, phot.

TERMITEN ANT-HILLS.

skilfully constructed shelters under the bushes and trees. Thus a miniature village grew up, of which I was the despotic ruler. The native hunters who visited us would sometimes accompany me on long expeditions.

For me there are no "savages." When an intelligent man comes across a tribe hitherto unknown to him he will carefully study their seemingly strange habits, and thus will soon recognise that they have their own customs and laws which they regard as sacred and immutable, and which order their whole existence. He will no longer desire the natives to adopt the manners and customs of the white man, for which they are absolutely unsuited.

But by the time I got friendly with these nomads they were off again. It is against their habits to stay long in one place, and they do not willingly enter into close relations with a European—or indeed with any one. Suddenly one fine morning we find their sleeping quarters empty; they have disappeared, never to return. No obligation, no command, would ever bind these wanderers to one place. Children of the moment, children of the wilderness, their lives are spent in constant roaming.

I hardly ever had a leisure hour, for there was much to arrange and see to in my camp. I had many functions to perform. I was my own commissioner of public safety; I looked after the commissariat; I was doctor and judge. I supervised all the other offices and pursued a number of handicrafts. Like Hans Sach I followed with pride the avocations of shoemaker, tailor, joiner, and smith, my very scanty acquaintance with all these various trades being put to

astonishingly good use. I was like the one-eyed man among the blind.

What judgments of Solomon have I not given! Once two of my best people quarrelled, an Askari and his wife. The serious character of the quarrel could be estimated from the noise of weeping and the sound of blows that had proceeded from their tent. The man wished to separate from his wife.

"Why did you beat your wife last night?"

The Askari (who has served under both German and English masters) stands to attention.

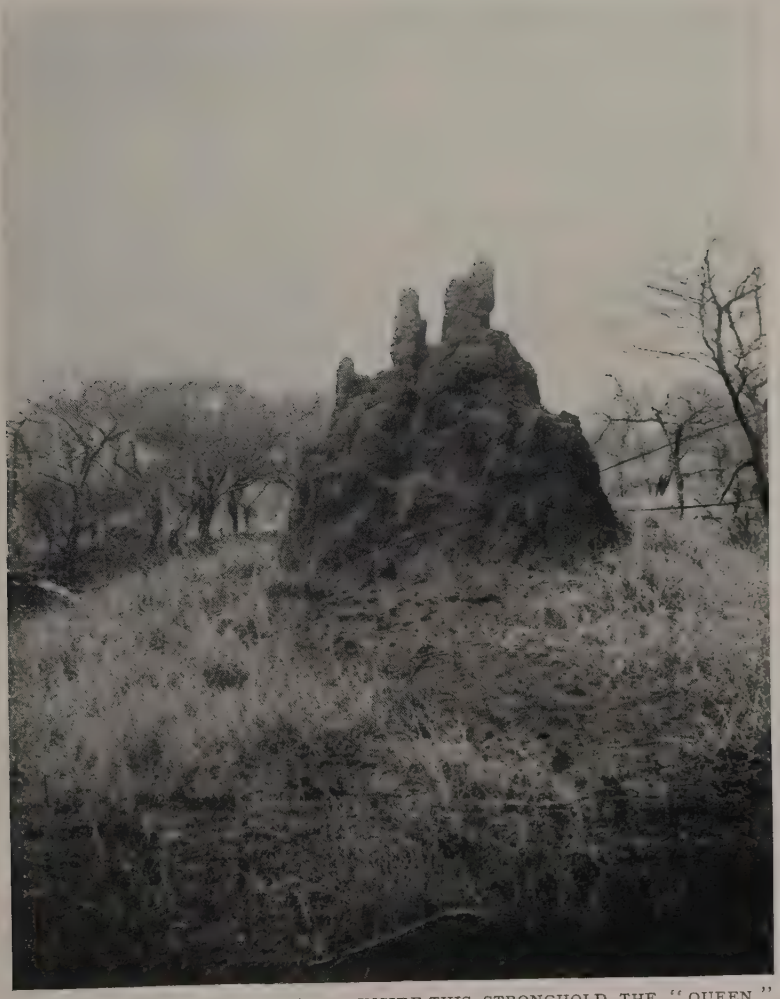
"Because she was badly behaved—I will not keep her any more—I am sending her away."

"But why—rafiki yangu?—my friend? Such things will happen at times, but it is not always so bad—see? Who will look after you? who will prepare your meals? Look at her once more; she is very pretty—don't you think so? And she cooks very well" (both parties, as well as the bystanders, are smiling by now). "Go along, then, and make friends."

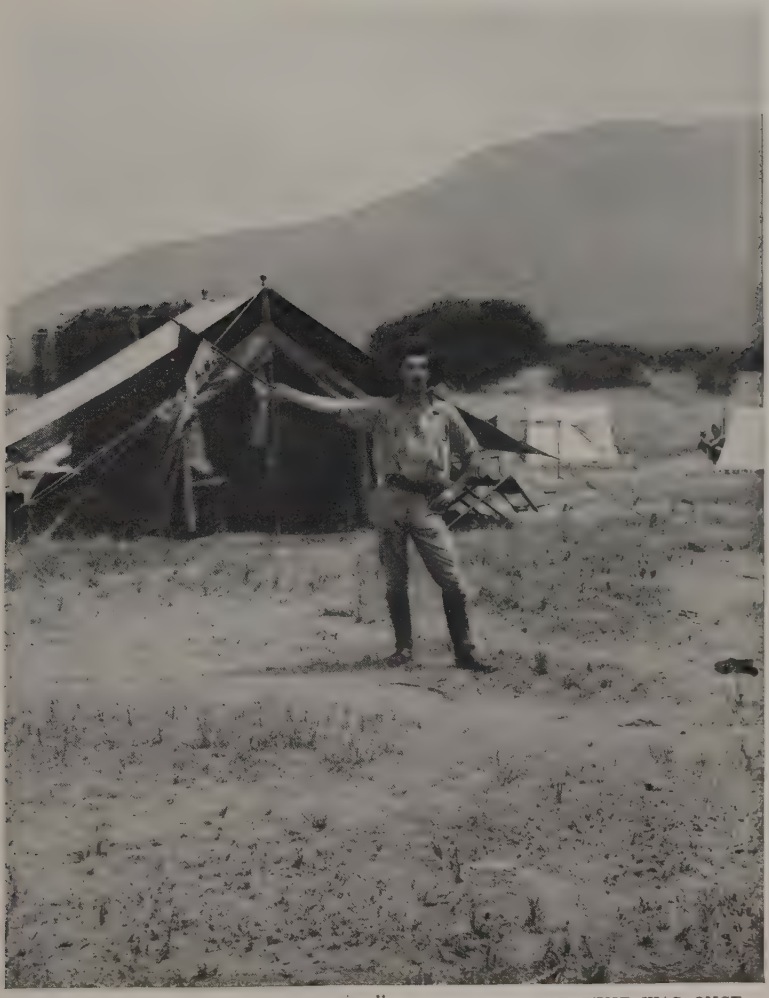
And they go and make friends.

A deputation of the Waparis come to the camp. They crouch down near my tent and beg for a "rain charm" to bring down showers upon their fields. It is somewhat difficult to help them. I take the gifts which they bring to pay for the charm and make them a more valuable return, and by means of the barometer I am able to foretell rain. They gaze at the wizard and his charm wonderingly, and come again later to see them both.

Countless similar events succeed one another, and ever



AN UNUSUALLY LARGE ANT-HILL. INSIDE THIS STRONGHOLD THE "QUEEN" ANT IS TO BE FOUND WALLED UP IN A SMALL CELL. SHE IS CONSIDERABLY LARGER THAN THE OTHER ANTS AND DEVOTES HERSELF EXCLUSIVELY TO HER TASK OF LAYING EGGS. THE KING ON THE OTHER HAND, NOT MUCH LARGER THAN THE REST, IS IN COMMAND OF THE "WORKERS" AND THE SOLDIERS.



MY FELLOW TRAVELLER PRINCE LÖWENSTEIN, WHOSE TENT WAS ONCE ENTIRELY DESTROYED BY ANTS IN A SINGLE NIGHT.

the everyday monotony of the simple camp life has its delights.

Day by day my menagerie increases. To-day it is a

young lion I add to it, to-morrow a hyena, a jackal, a monkey, a marabou, geese, and other velt-dwellers, all of which I instal as members of my little community and try to become friends with. My efforts have sometimes been amply rewarded. Once during the early morning hours we discovered a large troop of baboons. It was cool: the

THE ANT-HILLS ARE SO STRONGLY BUILT AND SO HARD THAT THEY OFFER AN EXTRAORDINARILY STRONG RESISTANCE TO ALL EFFORTS TO DESTROY THEM BY PICK AND SHOVEL.

cold, damp morning mist grew into a drizzling rain; the animals huddled up closely together for the sake of warmth. Later they came down to seek their food. Cautiously we posted ourselves as if we had not noticed the monkeys. But remembering their long sight, I organised a battue, which succeeded admirably and secured me several young ones. At first the comical creatures obstinately withstood

"POSCHO! POSCHO!" MY CARAVAN-LEADER HANDING OUT PROVISIONS.

BEARER'S WIFE GETTING READY THE EVENING MEAL.

MY YOUNG BABOONS IN FRONT OF MY TENT.

YOUNG OSTRICHES.

all efforts to tame them. Soon, however, they got to recognise their attendant, and became attached to him. Unlike other species of monkeys, baboons are full of character. Like some dogs, they are devoted to their masters but antagonistic to other people. They show their dislike for strangers very clearly. I was always much touched, when I came back from a long tramp on the velt,

MARABOU NESTS.

to be met with outbursts of joy by my chained-up baboons. They recognised their master in the far distance, reared themselves on their hind legs, and gave demonstrations of joy in every possible way as they saw him approaching.

Sometimes, too, other inmates of my camp evinced their pleasure at my appearance. This was especially the case with a marabou which I had caught when fully

grown. As he had been slightly hurt in the process of capture, I tended him myself most carefully, and experienced great satisfaction on his restoration to health. From the time of his recovery the bird was faithful to me, and did not leave the camp any more, although he was only caged at night-time! He attached himself to my headman, and tried to bite both men and beasts whom he considered as not to be trusted, and generally sat very solemnly in the vicinity of my camp and greeted me on my home-comings by wagging his head and flapping his wings. Such a clatter he made as he gravely rushed backwards and forwards! Not until I caressed him would he be quiet. After a time he began to build himself a nest under the shade of a bush quite close to my tent. The dimensions of this nest gradually increased in an extraordinary manner. This eyrie he defended to the utmost, and would not allow my blacks to go near it, or any of his animal companions. Great battles took place, but he always made his opponents take to their heels, and even the poor old donkey, if it happened to come his way. On the other hand, he was very friendly with my young rhinoceros. It was an extraordinary sight to see the rhinoceros with its friends, the goats and the solemn bird. Two fine Colobus monkeys, three young lions, young ostriches, geese, and various other creatures made up my little zoological garden. They all were good friends among themselves and with my tame hens, which used to prefer to lay their eggs in my tent and in those of the bearers. Sometimes I used to entrust some francolin eggs to

C. G. Schillings, phot.

ONE OF MY MARABOUS, NOW IN THE BERLIN ZOOLOGICAL GARDENS, BUILT A GREAT NEST IN MY CAMP.

C. G. Schillings, phot.

TWO DENIZENS OF THE VELT WHO BECAME MEMBERS OF MY CAMP AND ARE NOW IN THE BERLIN ZOOLOGICAL GARDENS.

C. G. Schillings, phot.

A RATHER MIXED-UP PHOTOGRAPH! MY YOUNG RHINOCEROS, WITH HER TWO COMPANIONS THE GOAT AND THE KID.

these hens. (Hardly any of the many beautiful East African species of francolins have so far been brought alive to Europe.) Once I had for weeks the pleasure of seeing some beautiful yellow-throated francolins (*Pternistes leucosepus infuscatus*, Cab.) running about perfectly tame among the other animals in camp.

I was often able to contemplate idyllic scenes among my quaint collection of animals. The behaviour of my baby rhinoceros interested me greatly. It was the pet of my caravan, and I was very proud of having reared it, for I had longed for two years for such a little creature, and had made many vain attempts to obtain one. Its friendship with two goats I have already mentioned in my previous book. They formed a strange trio. Very often the kid used the rhinoceros as a cushion, and all three were inseparable. The beast and the two goats often made little excursions out into the immediate neighbourhood of my camp. At these times they were carefully guarded by two of my most trustworthy people. The "rhino" was provided with its accustomed vegetable foods. When the little beast was in a good humour it would play with me like a dog, and would scamper about in the camp snorting in its own peculiar way. Such merry games alternated with hours of anxiety, during which I was obliged to give my foster-child food and medicine with my own hands, and to fight the chigoes (*Sarcopsylla penetrans*, L.), commonly called "jiggers," those horrible tormentors which Africa has received from America.

In the evening my flocks and herds of sheep, goats

and cattle came home, and among them some gnus which I had been able to obtain from an Arab through the friendly help of Captain Merker. It reminded one of pictures of old patriarchal days to see the animals greet their expectant calves and kids. It was always interesting, too, to watch the skilful handling of the cattle by the Masai herdsmen. The cows in Africa all come from Asia, and belong to the zebu family. They will only give milk when their calves have first been allowed to suck. Only then can the cow be milked, and that with difficulty, whilst a second herdsman holds the calf for a while a little distance off. Thus it was I obtained, very sparingly at first, the necessary milk for my young rhinoceros. Some days there was a grand show of varied animal life. Cows, bullocks, sheep, goats, my rhinoceros, young lion-cubs, hyenas, jackals, servals and monkeys, hens, francolins and marabou, geese, and other frequenters of the velt were in the camp, some at liberty and some chained, which caused many little jealousies and much that was interesting to notice.

My kitchen garden was invaded by tame geese and storks, which lived on the best of terms with the cook. It was irresistibly funny to see the sage old marabou acting as cook's assistant, gravely crouching near him and watching all his movements. Very often the tame animals in my camp had visitors in the shape of wild storks and geese, which came and mixed among the others, so that often one could not distinguish which were wild and which tame. We could see all kinds of

C. G. Schillings, phot.

—AS SHE WAS IN MY VELT CAMP.

C. G. Schillings, phot.

MY RHINOCEROS AS SHE IS TO-DAY IN THE BERLIN "ZOO," AND—

animals coming close to the camp. I have even followed the movements of rhinoceroses with my field-glasses for some time.

Some of my captives were not to be tamed at any price. We had a young hyena, for instance, which struggled obstinately with its chain. On the other hand, some hyenas, especially spotted ones, became so domesticated that they followed me about like dogs.

A young lion which I had had in my camp for some time, and which had grown into quite a fine specimen, often made itself so noticeable at night that, as my watchman told me, it was answered by other lions from outside. This made it necessary to take active precautions for the night, and my menagerie was brought into the centre of my camp for greater safety.

Many of the friendships which I formed with my *protégés* have been kept up. My marabou still remembers me, and greets me with great joy in his cage in the Berlin Zoological Garden, much to the irritation of his neighbour in the cage next door. I have no need to avoid the grip of his powerful beak, which the keeper has learnt to fear. He has never used this weapon against me. In whatever dress I may approach him he always recognises me, and greets me with lively demonstrations of pleasure. Even the rhinoceros seems to recognise his one-time master, although one cannot be quite sure of this in so uncouth a creature.

It is very difficult to know how to manage a rhinoceros. It was quite a long time before I succeeded in discovering its best diet. Young rhinoceroses almost always succumb

in captivity, though seemingly so robust. We have not yet succeeded in bringing an elephant from German or British East Africa to Europe, or indeed any of the other animals, such as giraffes and buffaloes and antelopes, which live in the same districts. It appears that it is just these interesting wild animals which are the most difficult to accustom to captivity and to keep alive. The attempt to bring home alive a couple of the wonderful Kilimanjaro Colobus apes (*Colobus caudatus*, Thos.) resulted in one of the monkeys dying a few days after my arrival; the other lived for two years only, and was the sole specimen of its kind ever seen in Europe. Every zoologist and lover of animals who goes into the colonies has a wide field of activity open before him in this respect. If only more people could be made to take an interest in these things we might buoy ourselves up with the hope of obtaining and keeping some of the best and rarest specimens of African animal life, perhaps even a full-grown gorilla from the West Coast—perhaps even an Okapi!

I was only able to keep my little menagerie together for a few weeks at a time, as I had to be constantly setting out on fresh expeditions. On these occasions I was accustomed to leave the animals in some village under the care of trustworthy blacks, so that I could take them again on my return journey to the coast. The weeks and months I spent in camp with my animals were a great source of pleasure to me. At night-time there were occasions when "rhinos" and "hippos" paid us visits, as could be plainly seen by the tracks found

HOW MY CAPTIVE YOUNG "RHINO" WAS CARRIED TO CAMP.

CARRYING A DEAD LEOPARD, TO AN ACCOMPANIMENT OF IMPROVISED SONGS.

"FATIMA" (AS I CHRISTENED MY "RHINO") AND HER TWO COMPANIONS ON THEIR WAY TO THE COAST.

A YOUNG HYENA, WHICH I HAD EXTRACTED FROM ITS LAIR, RESISTED AT FIRST ALL EFFORTS AT TAMING IT.

the next morning.[1] Hyenas and jackals came very often, and even lions sometimes came to within a short distance of the camp. Thus my zoological garden, in spite of its size, could well boast of being, so to speak, the most *primitive* in the world.

But we had our anxious moments. Death levied its toll among my people, and the continual rumours of uprisings and attacks from outside gave plenty to talk about during the whole day, and often far on into the night over the camp-fire. When one of these charming African moonlit nights had set in over my homestead, when the noise of the bearers with their chatter and clatter had ceased, and my work, too, was done, then I used to sit awhile in front of the flickering flames and think. Or I would wander from fire to fire to exchange a few words with my watchmen, to learn their news and their wishes and to ask much that I wanted to know. This is the hour when men are most communicative, and unless there be urgent need of sleep the conversation may continue far into the night.

There is something strangely beautiful about those nights in the wilderness. My thoughts go back to an encampment I once made at the foot of the volcanic mountain of Gelei, close to a picturesque rocky gorge, in the depths of which was a small stream—a mere trickle during the hot weather. Its source lay in the midst of an extensive acacia wood, which tailed off on one side into the bare, open "boga," while on the other it became merged in a dense thicket of euphorbia trees, creepers,

[1] Cf. *With Flashlight and Rifle.*

and elelescho bushes, impenetrable to men but affording a refuge to animals, even to elephants. On the day before I had noted the fact that Masai warriors had recently encamped in the neighbourhood, with cattle which they had got hold of on a marauding expedition (and some of which they had here slaughtered), and that with their booty they had betaken themselves over the English frontier. It was quite on the cards that roaming young Masai warriors would suddenly turn up while I was there. It was several days' journey to the nearest inhabited region. For weeks together one would see no human soul save for a nomadic hunter every now and again.

The great barren wilderness, which then in the dry season could boast of no verdure save the evergreen Hunger-plant, so well suited to the arid velt; the romantic site of my camp; the beautiful moonlight night, darkened over from time to time by great masses of clouds, heralding the approach of rain; the dangers lurking all around: everything conspired to produce a wonderful effect upon the mind. The night had come upon us silently, mysteriously, jet-black. Before the moon rose, one's fancy foreshadowed some sudden incursion into the death-like darkness, the bodeful silence. There was something weird and unnatural about the stillness—it suggested the calm before the storm. Faint rustlings and cracklings and voices inaudible by day now made themselves heard. The world of the little living things came by its own, and crackled and rustled among plants and branches and reeds and grass. Hark! Is that the sound of a cockchafer or a mouse, or is it the footstep of a foe? . . .

C. G Schillings, phot.

VULTURES ON THE WING.

C. G. Schillings, phot.

VULTURES HOVERING OVER THE CARCASE OF A GNU WHICH HAD BEEN KILLED BY A LION.

C. G. Schillings, phot.

VULTURES MOVING AWAY FROM A CARCASE, STARTLED AT MY APPROACH. (WHEN FIGHTING OVER A CARCASE, THEY GIVE OUT A HISSING KIND OF SOUND.)

C. G. Schillings, phot.

MY PELICANS (*TANTALUS IBIS*, L.), WHICH AFTERWARDS TOOK UP THEIR ABODE IN THE BERLIN ZOOLOGICAL GARDENS.

Even within my tent there are evidences of life. Rats bestir themselves upon their daring enterprises, to meet their end, here and there, in my traps. Emin Pasha has told us how he experienced the same kind of thing. How dormice and beautiful Sterkulien made their home in his camp, gleefully climbing up and down the canvas of his

A SIESTA IN CAMP. THE MIDDAY HOUR.

tent during the night—doubtless gazing at the strange white man with their great, dark, wide-open eyes, as they did at me. . . . Save for these sounds there is complete stillness, broken only by the voice of the night-jar, mournful and monotonous, as it wings its eerie, noiseless flight in and out of the firelight and round and round the camp.

Beyond the glow of the camp-fire our eyes cannot travel—we cannot see what is happening outside the camp, even quite close at hand. This intensifies one's feeling of insecurity, for I know well how suddenly and with what lightning speed the great felines manage their attacks. It is in just such circumstances that so many men fall victims to lion and leopard. One evening a leopard will snatch a small dog from your feet, the next it will carry off one of the native women before the eyes of the whole population of your camp. You must have had such things happen to you, or hear of them from eye-witnesses, to realise the danger.

Near my tent stand two hoary old trees all hung with creepers. In the uncertain firelight they seem to be a-quiver with life, and they throw phantom-like shadows. I hear the soft footsteps of the watch—they recall me to actualities. Now the moon emerges, and suddenly sheds its brilliant radiance over the entire velt. It is like the withdrawing of a pall. My thoughts wander away upon the moonbeams, and travel on and on, over land and sea, like homing birds. . . . The reader who would steep himself in the beauty and strangeness of this African camp-life should turn to the pages of that splendid work *Caput Nili*, by my friend Richard Kandt. There he will find it all described by a master-hand in a series of exquisite nature-pictures. In language full of poetic beauty he gives us the very soul of the wilderness. These studies and sketches, from the pen of the man who discovered the sources of the Nile, are a veritable work of art. It is easier for the nature-lover to give himself up to the

C. G. Schillings, phot.

A STRANGE FRIENDSHIP SPRANG UP BETWEEN A SMALL APE AND A GOSHAWK THAT I HAD AT HOME AT AN EARLIER DATE. THE APE USED OFTEN TO PULL THE BIRD ABOUT PLAYFULLY, WHILE TWO STORKS LOOKED ON WITH INTEREST.

C. G. Schillings, phot.

"FATIMA" PROWLING ROUND. SHE WAS ON PARTICULARLY GOOD TERMS WITH THE MARABOU.

C. G. Schillings, phot.

CARRYING A FINE LEOPARD, WEIGHING 145 POUNDS, INTO CAMP. IT HAD BEEN TRAPPED.

THE BEARERS ALWAYS LIKE TO "KILL" THE GAME IN ACCORDANCE WITH MOHAMMEDAN RITES, EVEN WHEN DEATH HAS ALREADY BEEN ENSURED BY THE HUNTERS AND HAS BEGUN TO SET IN. WHEN THESE RITES CANNOT BE FULFILLED, THEY WILL SOMETIMES REFUSE TO EAT THE FLESH.

WHILE THE GAME IS BEING CUT UP, THE NATIVES OFTEN HAVE RECOURSE TO INNOCENT HORSEPLAY BY WAY OF VENTING THEIR HIGH SPIRITS.

charms of this African solitude than to set them forth adequately in words.

Wonderful, indeed, is the beauty of those African moonlight nights. Their radiant splendour is a thing never to be forgotten. How faint and faded in comparison seem our moonlight nights at home!

A TRAPPED LEOPARD.

Through the camp, past the smouldering and flickering fires, the Askari sentry wanders noiselessly. He is a man well on in years—a tried man who has often been with me before. Years ago he vowed he would never again return to the wilderness with a "Safari," yet every time I revisit Africa the spell of the wild has come over him anew, and he has been unable to resist.

He comes to me now and says, as he has had so often to say before: "Master, do you hear the lions yonder in the distance?" And he makes his way towards the great fire in the centre of the camp and throws some fresh logs upon it. Flames spring up, blazing and flickering in the moonlight.

THE BABOON AND THE LITTLE BLACK LADY.

C. G. Schillings, phot.

MOONLIGHT ON THE VELT.

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A FOWL OF THE VELT (*PTEROCLES GUTTURALIS SATURATIOR*, Hart).

XV

Night Photography under Difficulties

THERE is a notion prevalent, due to superficial observers, that there are certain drinking-places to which the wild animals are bound to come to quench their thirst, in all circumstances, during the hot season. Were this so the animals would have ceased ere now to exist. The poisoned arrow of the native, or the rifle of the white man, would long since have exterminated them. It is the case, however, that you can count upon finding game at specific drinking-places in the hot weather under certain circumstances, though much depends upon the direction of the wind and other things. The appearance of the larger beasts of prey by the waterside is enough, for instance, to make the others keep their distance for a considerable time.

When I have encamped in such localities it has generally been with a view to securing specimens of rare birds,

and apart from this I have confined myself to making observations of the life of the animals. Very large bull-elephants were the only kind of big game that I had any mind to shoot, for I was never at a loss for other kinds. Elephants roam about in the hot season from one watering-place to another, sometimes covering great distances. They know the danger they run in frequenting any one particular watering-place too regularly. This is true of herds of other animals as well.

These watering-places are, of course, very productive to the natives, who make no account of time and who spread themselves out over a number of them during the hot weather, thus multiplying their chances. But the havoc worked among the wild animals by their poisoned arrows or the other methods of hunting which they practise, when they have not taken to powder and shot, is not serious. They have been hunting in this way since prehistoric ages, and yet have been able to hand over the animal kingdom to us Europeans in all the fulness and abundance that have aroused our wonder and admiration wherever we have set foot for the first time.

In the course of my last journey I encamped for the second time at the foot of the Donje-Erok mountain (the circuit of which is a two-days' march), to the north-west of Kilimanjaro. The region had been well known to me since 1899. Previously to then it had been traversed only by Count Teleki's expedition. His comrade, the well-known geographer Ritter von Höhnel, had marked its outlines on the map. No one, however, had penetrated into the interior, and here a wonderful field offered

itself to the sportsman and explorer. A number of small streams take their rise on the Donje-Erok. In the dry weather these are speedily absorbed by the sun-dried soil of the velt, but in the wet season they have quite a long course, and combine to form a series of small swamps. When these have gradually begun to dry and have come to be mere stretches of blackish mud, they reveal the

A RIVER-HORSE RESORT.

tracks of the herds of animals that have waded through them, elephants and rhinoceroses especially—mighty autographs imprinted like Runic letters upon wax.

In the dry season great numbers of animals made always for a source—very speedily dried up—to the south of the mountain. It was in this vicinity that I proposed to secure my pictures of wild life.

My caravan was very much on the *qui vive* when at last, after a long march, we were able to strike camp. We had been attacked by a band of Masai warriors during the night and had driven them off. It was only natural, therefore, that we should exercise some caution. But our fatigue overcame all anxiety as to another attack. We had made a long forced march, and were worn out with our exertions and our sufferings from thirst and the heat. Some of the bearers, succumbing under the weight of their burdens, had remained behind. We had started on the previous morning, each of us provided as well as was practicable with water, and had marched until dark, passing the night waterless and pressing on at daybreak. It was absolutely essential now to get to a watering-place, so we put out all our efforts, just succeeding in reaching our goal after nightfall. This march was the more exhausting in that we had had only two hours' sleep before the fray with the Masai. The bearers we had been obliged to leave behind were afterwards brought into camp safely by a relief party.

On exploring our vicinity next morning we found that our camp, which was to some degree safeguarded by a thorn-fence—a so-called "boma"—adjoined several earlier camps of native elephant-hunters, protected by strong palisades : a thing that had often happened to us before. These camps are to be recognised by the empty powder-casks left about or by the erection somewhere near of a fetich or charm to ward off evil, or something of the kind. It is only the natives who use firearms that have resort to such practices. So far as I know neither the

Wakamba nor the Wandorobo are addicted to them. In this particular case the charm took the shape of an arrangement of large snail-shells in the midst of a small enclosure four feet square. That it proved efficacious was suggested by the spectacle of the skulls and remains of some twenty recently killed rhinoceroses within a few

ONE OF THE PEAKS OF DONJE-EROK, IN THE VICINITY OF KILIMANJARO.

paces of the camp. . . . I had met with just the same state of things in 1900. These "sanctioned" elephant-hunters —or, to use the recognised term, these "trustworthy Fundi"—are an absolute pest. The arch exterminator of the elephants in the Kilimanjaro region was Schundi, the former slave of a Kavirondo chief. Schundi, in his capacity as a political agent and licensed elephant-hunter,

scoured the entire country with his men from 1893 to 1900.[1]

In the heart of the thicket we came suddenly upon a quite recent camp of native hunters of some kind—not Wandorobo, we judged, from utensils which they left behind, of a sort the Wandorobo never use. I was aware that other tribes had taken to hunting the animals in this region, the Masai themselves setting about it quite in the Wandorobo fashion. Our chief "find" in the camp, however, was a collection of some forty zebra-hides, quite freshly secured, and about the same number of hides of gnus as well as others of smaller game. Most of these skins were stretched out on the ground to dry, fixed with pegs. Probably the fugitives had taken a number of others away with them. I came to the conclusion that the natives were of the class that hunt on behalf of Indian, Greek, and other traders—a class far too numerous nowadays. The traders pay them very little for their labours, and themselves make huge profits out of it all.

I took possession of the skins, prepared the best of them very thoroughly and carefully, and then sent them to Moschi, for despatch to the Berlin Museum. This task occupied me for two days, but I undertook it with gusto, for I knew that by reason of the variety of species of zebras and gnus frequenting this region, this big collection of skins was of great scientific value. And I rejoiced the

[1] Recent reports from West Africa confirm what I say about the disastrous results of allowing the natives to hunt with firearms. The same regrettable state of things prevails in every part of the world in which this is permitted.

C. G. Schillings, phot.

WHEN STARTING ON A LONG "TELEKESA-MARCH"—A MARCH OF MORE THAN TWENTY-FOUR HOURS BEFORE REACHING THE NEXT WATERING-PLACE—MY MEN PROVIDED THEMSELVES WITH AS MUCH WATER AS THEY COULD CARRY.

more over my treasure-trove in that it exempted me from shooting any more zebras or gnus myself. But my calculations were all to be upset. On my notification to the station that I had not bagged the animals myself, but had found them lying about in a bush-camp where they had been abandoned by nomadic native hunters, it was decided that they could not be recognised as my property

VULTURES.

without further proceedings. Eventually the matter was decided in my favour by a governmental decree, but in the meantime the skins were considerably damaged by insects and otherwise. Could I have foreseen this, I should not have been at the trouble and serious expense of saving them, but should have left them as a welcome feast to the hyenas and jackals. What I was still able to save out of the lot I sent later to the Berlin Museum.

Near some of the drinking-places along the river I found the cleverly contrived reed-shelters behind which the natives take refuge. The immense numbers of vultures and jackals and hyenas showed that these gluttonous creatures had found an abundance of provender, especially near the deserted camp. The vultures, which were of various species, came down from their perches on the trees and settled on the ground quite near us. It was brooding-time for some of the larger species, and presently I found a great number of their nests with young birds in them. It was very interesting to watch the old birds and their young together.

It took me about a week to decide on the spots best suited for my flashlight photographs. After a good deal of really hard work, and after any number of unsuccessful efforts, I was at last satisfied that my three cameras were so placed as to promise good results if I had any luck. But the fates seemed against me. There were hundreds of different drinking-places along the course of the stream, and with so great a choice at their disposal the animals appeared to give my camera a wide berth.

Some days later we had an unpleasant surprise. One of my Askaris had gone at daybreak, as was his custom, to examine one of my jackal traps. Suddenly we heard the sound of shots in the direction of the trap, about twenty minutes' walk from the camp. As in view of my strict orders against shooting at game there could be no question of this, we at once assumed that we had to reckon with an attack by natives. In a trice I had all my arrangements made. Dividing my armed followers

C. G. Schillings, phot

FLASHLIGHT PHOTOGRAPHS.

C. G. Schillings, phot.

FLASHLIGHT PHOTOGRAPHS OF HYENAS (*HYÆNA SCHILLINGSI*, Mtsch.) AND JACKALS.

into two sections, I set out instantly with one of them in the direction of the Askari, leaving the other with Orgeich to defend the camp.

What had happened? It was the old story, so familiar to all experienced travellers, and showing how easily one may be drawn into a fight, yet how easily trouble may be avoided if one takes the right line. My Askari, normally a very steady and reliable man who had been in the service of the Government, had been startled by the sudden apparition right in front of him of a great band of Masai warriors armed with spears. They had raised their spears, no doubt instinctively, at the sight of the rifle-bearing soldier. He, for his part, and his two unarmed comrades, jumped simultaneously to the conclusion that these were the same Masai who had previously attacked us. He decided at once to fire. In an instant the Masai vanished in every direction.

It was not a laughing matter. There had been recent fights in the neighbourhood of my camp between Masai warriors and the inhabitants of the Uferi district—the remains of men who had been killed in these frays bore witness to the truth of what my guides had told me about them. And it was not long since certain European cattle-dealers, at a spot some two days' journey farther on, had been murdered by the Masai. These facts, taken in connection with the night-attack, made us realise the need of caution.

On reaching the scene of the incident, I ascertained that a great band of Masai, accompanied by their wives, had been seen on the previous evening in the neighbour-

hood of the stream, and that they had encamped for the night in a mouldering old kraal in the thorn-thicket, and it was while slumbering peacefully in this that they were disturbed by my Askari. Scattered all over the place were goods and chattels of various descriptions which they had left behind them in their hasty flight, and which I now had carefully collected together. From their nature I concluded that the Masai were making for some place at a considerable distance, and that there was, therefore, no danger of unpleasant consequences. I returned to my camp to reassure my people, and at once got some of my Masai friends, who had been with me for a long time, to go after the fugitives and bring them back. That was the only way to effect an understanding—any other messengers would have failed in the mission.

Towards midday my Masai returned to camp with some thirty of the spear-armed warriors and a number of their women-folk. I gave them back their belongings, together with a present by way of *amende* for their fright. This they accepted with equanimity after the manner of all natives. Then they took their departure, the incident being thus happily terminated without bloodshed.

Curiously enough, Orgeich had had a somewhat similar encounter with Masai a short time before. He had been for a turn in the neighbourhood of the camp, and was coming back in the dark along a rhinoceros-track. When he had got to within a quarter of an hour's walk of the camp, there was a sudden clatter right in front of him, and in the uncertain moonlight he descried a band of armed Masai. Remembering the recent night-encounter

he instantly raised his rifle to fire. But the veteran soldier had self-control enough to resist the impulse, and in this

MY NIGHT-APPARATUS IN POSITION, READY TO WORK.

case also there were no ill consequences. But, as he still continues to declare, it was a near thing.

Such incidents, it will be recognised, can very easily lead to serious results.

Later I was to have an unpleasant experience in regard to natives. A band of nomadic hunters, perhaps those who had encamped where I found the zebra-skins, had "gone for" two of my cameras. They had taken away all those parts of them that could be of any use to them, and left them of course quite useless to me. It is noteworthy that they did not smash them to pieces, as Europeans might have done. They had merely detached the metal portions and others which they could turn to some account. This loss was, however, very annoying to me, and I found it necessary to establish two relays of men on guard to look after the sole remaining apparatus throughout the day.

A PET OF THE CARAVAN.

C. G. Schillings, phot.

A BAOBAB (*ADANSONIA DIGITATA*). THESE TREES ARE OFTEN BELIEVED BY THE NATIVES TO BE INHABITED BY GHOSTS. THEY USED TO COME INTO THE STORIES TOLD BY MY FOLLOWERS.

THE FIRST FLASHLIGHT PHOTOGRAPH WITH WHICH I HAD ANY MEASURE OF SUCCESS! A MONGOOSE MAY BE JUST GUESSED AT UNDER THE THORN-BRANCH.

XVI

Photography by Day and by Night

THERE is an old German recipe for the catching of a lion: you put the Sahara through a sieve—and behold the King of Beasts!

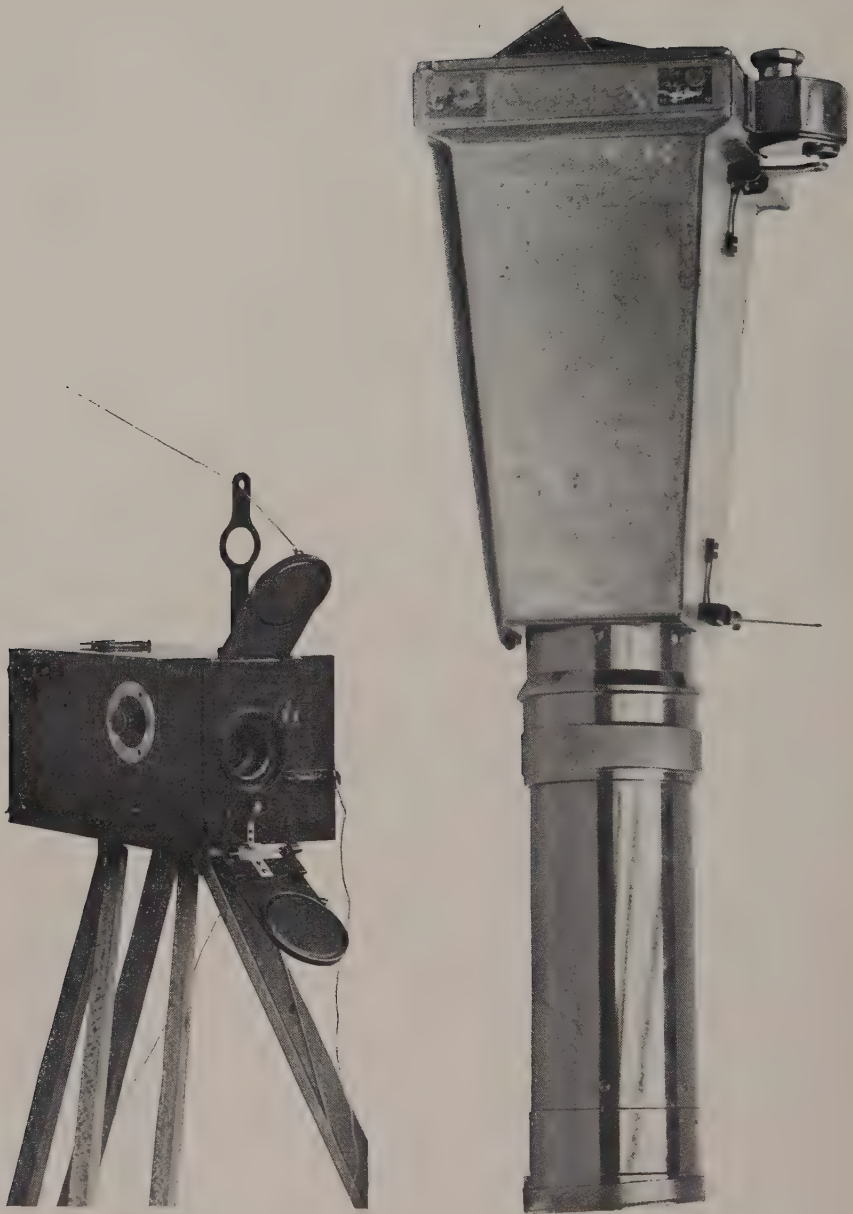
The photographing of lions is not to be managed so easily. I am always being asked how I took my photographs. I shall try to give an answer in the following pages.

Before *With Flashlight and Rifle* was published, the only successful photographs taken by night that were known to me were some few excellent pictures of certain species of American deer, secured by an enthusiastic sportsman (a legal official in the service of the Government of the United States) after years of untiring effort. After any number of fruitless attempts, this gentleman contrived to photograph these animals grazing by night near the banks of a river down which he drifted in a

boat. He set up a row of cameras in the bow of his craft, and when it passed close to the deer standing in the water, he let his flashlight flame out, and in this way produced—in the course of ten years or so—a number of very interesting photographic studies, which made his name well known in his own country and which won him a gold medal at a Paris Exhibition, where his work aroused much attention. I was familiar also with the "telephoto" pictures which Lord Delamere brought home from East Africa.[1] Those of Mr. Edward North Buxton were published first in 1902, so far as I know. I myself, I should explain, do not profess to be a complete master of the photographer's art. Indeed, I rather rejoice in my ignorance of many of the inner secrets of the craft known only to experts, because I believe it has helped me to get a certain character into my pictures which would perhaps have eluded one whose mind was taken up with all the difficulties involved in the task.

At first sight the photographing of animals may seem a simple enough matter, but if we look at the photographs taken in zoological gardens or in menageries or game reservations, or photographs taken during the winter at spots to which the animals have had to come for food, or at the various touched-up photographs one sees, we shall find that there are very few of any real worth from the standpoint of the naturalist. Whoever would take photographs of value should take care that they be in

[1] I do not know of any "telephoto" picture of animals in rapid motion having been published anywhere previously to my own. Those I refer to here are of animals at rest or moving quite slowly.



THE APPARATUS WHICH I FIRST USED FOR MY NIGHT-PHOTOGRAPHS, WITH THE SHUTTER KEPT OPEN (*see* p. 687).

THE GOERZ-SCHILLINGS NIGHT-APPARATUS.

no way altered or touched up. Touched-up photographs are never to be trusted.

The story of my progress in the art of animal photography is soon told.

In 1896 and 1897 I was not adequately equipped, and I took only a few photographs, all by daylight.

After going through a careful course of instruction in Kiesling's Photographic Institution, I did not succeed in entirely satisfying myself with the daylight photographs I took on my second expedition of 1899—1900. It was impossible at that time to photograph objects at great distances, the telephoto lens not yet carrying far enough. My efforts to photograph the animals by night proved entirely fruitless, for one reason because the flashlight apparatus would not work. It was exasperating to find that my heavy and expensive "accumulators"—procured after consultation with technical experts—refused to act, and I remember vividly how I flung them out into the middle of a river! I achieved but one single success at this period with a self-acting apparatus, namely the photograph of two vultures contending over carrion, here reproduced; one of them has been feeding, and the other is just about to assert its right to part of the meal. The attitudes of the two birds are very interesting, and one feels that it would have been very difficult for a painter to have put them on record. But all my other attempts failed, as I have said, from technical causes, and I had to content myself for the most part with photographing the animals I hunted, though I did succeed in getting pictures of a waterbuck and a giraffe at which I had not

shot. My photographs won so much approval from experts on my return home that I was encouraged to go further in this direction.

But what difficulties I had to overcome! So far back as the year 1863 a German explorer, Professor Fritsch, now a member of the Privy Council, had set about the task of photographing wild animals in South Africa. Those were the days of wet collodion plates, and it is really wonderful how Professor Fritsch managed to cope with all the difficulties he had to face so far from all possibility of assistance. He succeeded in the course of his expedition in photographing an African wild animal upon a dry plate for the first time on record. By his kindness I am enabled to reproduce this historical picture here—it is a thing of real value. It is the photograph of an eland, at that time an animal often met with in Cape Colony, where game of all kinds has now been almost completely exterminated. Professor Fritsch's account of his experiences should be heard for one to form any notion of the wealth of animal life that then adorned the South African velt. His photographs are especially interesting as the first of their kind. It was not until nearly forty years later that the English sportsmen already mentioned and I myself embarked systematically upon similar enterprises.

On my third expedition in 1902 I tried to photograph with two telephoto cameras which had been placed at my disposal by the Goerz Optical Institute. Without attempting to explain the complicated mechanism of these apparatus—the idea of which came first to English

C. G. Schillings, phot.

AUTOMATICALLY TAKEN PHOTOGRAPH OF TWO VULTURES ENGAGING IN A CONTEST OVER CARRION.

travellers—I may say that they are beset with difficulties. They require a long exposure, and are best suited, therefore, for stationary objects. If you wish to photograph animals in motion, you must learn to expose your negative

THE FIRST DRY-PLATE PHOTOGRAPH, PROBABLY, EVER TAKEN IN THE AFRICAN DESERT. THE WORK OF ONE OF THE OLDEST OF AFRICAN EXPLORERS, PROFESSOR FRITSCH, IT REPRESENTS AN ELAND WHICH HE HAD KILLED —A SPECIES THEN FREQUENTLY MET WITH IN CAPE COLONY.

long enough to secure a clear impression, yet not so long as to make the moving animals come out quite blurred. I am strongly of opinion that it is not of much advantage to make out a table of calculations as to the time of

exposure. Experience alone can enable you to judge what exposure to allow. When you have got your shutter to the correct speed and chosen the correct diaphragm for your lens, you must get into the way of using the camera as quickly and deftly as your rifle.

In this way, just as in shooting, you will learn to allow for the movements of the object you are aiming at—you will let your camera move accordingly. This needs a lot of practice. At the period when I was using the Goerz apparatus, a large number of similar cameras of all sizes were returned to the manufactory by practical photographers as unuseable. This shows how difficult it is to form any opinion as to the possibilities of the telephoto lens without going in for thorough and repeated experiments.

It is only on rare occasions that you are able to use a stand-camera for photographing objects at a distance. In most cases you must shoulder your photographic gun, and it may be easily imagined what dexterity is required for its proper management. In following up the moving object with your lens you inevitably make the background something of a blur. You are apt at the same time to underexpose. The change of diaphragm and the modification of the speed of the shutter involve many failures. The telephoto lens has this advantage, however, that you can generally get good results with it at a hundred paces. In the case of birds on the wing, either rising or flying past you, you have to get into the way of reckoning the distance—a difficult matter. Of course you must always have the sun more or less behind you. The conditions of the atmosphere in the tropics—the shimmering waves of

C. G. Schillings, phot.

THIS PHOTOGRAPH BEARS WITNESS TO THE DESIRABILITY OF HAVING PERFECTED FILMS TO WORK WITH, FOR GLASS PLATES ARE APT TO BREAK AND GOOD PICTURES TO BE QUITE SPOILT IN CONSEQUENCE.

light that rise up out of the scorched soil, for instance—make it peculiarly hard to calculate the time of exposure, and many photographs turn out failures which you have felt quite sure of having taken properly. This is specially disappointing in the case of animals that you may never have another opportunity of photograpning. In such cases I make a practice of giving as many exposures as possible, in the hope of one or other of them turning out right.

You often miss splendid chances, of course, simply through not having your camera at hand. A few moments' delay may lose you an opportunity that will never come to you again. Then, again, you are just as apt in Africa as elsewhere to make the mistakes so well known to all photographers—wrong focussing, using the same plate twice, not getting your objects properly on the plate, etc. Nor can you always avoid having a tree or bush or branch between you and the animal you want to photograph. These things are often enough to quite spoil your picture. The weight of the camera, too, is in itself a hindrance. It is not every one who can handle a 13 × 18-cm. telephoto camera. Even a 9 × 12-cm. is heavy enough. It must be remembered that on one's journeyings through the wilderness it is almost as much as one can do to carry with one a sufficient supply of water—that most essential thing of all. And one has to be most careful of the apparatus, for mischances may occur at any moment.

Though my experiences and those of others will have had the effect of smoothing the way for all who go photographing in future in Equatorial Africa, still, hunting with the camera will remain a much more difficult thing than

hunting with the rifle. The practised shot needs only a fraction of a second to bring down his game—often he scarcely even sees it, and fires at it through dense shrubs or bushes, whereas the photographer can achieve nothing until he has contrived to secure a combination of favourable conditions, and he wants in many cases to "bring down" not just one animal, but a whole herd. His most tempting chances come to him very often when he is unprepared. That is why I insist upon the desirability of his shouldering a camera like a gun. At short range you can secure wonderful pictures even with an ordinary small hand-camera, but for this kind of work you must of course have good nerves. . . . It was in this way I took the photographs of the rhinoceroses in the pool reproduced in *With Flashlight and Rifle*, some of the best I ever secured. One of these, taken at a distance of fifteen or twenty paces, shows the "rhino," not yet hit, rushing down upon Orgeich and me. In another instant I had thrown my little hand-camera to the ground, and just managed to get a bullet into him in the nick of time. He swerved to one side and made off into the thicket, where I eventually secured him. He is now to be seen in the Munich Museum.

A fruitful source of disillusionment lies in the fact that the plates are sensitive to the light to a degree so different from our eyes. As the blue and violet rays chiefly act upon them, they cannot render the real effects of colouring. It is greatly to be desired that we should manage to perfect orthochromatic plates, sensitive to green, yellow and red rays of light. I myself have been unable to secure

C. G. Schillings, phot.

A PLATE WHICH I EXPOSED TWICE BY MISTAKE—SUCH MISTAKES WILL HAPPEN SOMETIMES, HOWEVER CAREFUL ONE MAY BE. IN ADDITION TO THE GNUS AND ZEBRAS WHICH STAND OUT CLEARLY IN THE PICTURE, FAINT OUTLINES OF HARTEBEESTS (ON A SMALLER SCALE) MAY BE DESCRIED.

good results with orthochromatic plates with the telephoto lens, as I have found them always too little sensitive to white light for instantaneous work. Latterly there has been produced a new kind of panchromatic plate which only needs an exposure of one-fiftieth part of a second, and I would strongly recommend its use for the photographing of animals for this reason.

In the animal pictures of the Munich painter Zügel, we see admirably rendered all the many shades of colouring we note, under different conditions, close at hand or far away, when we have the actual wild life before our eyes. There we note that the upper part of the animal's body often reflects so strongly the cold blue of the sky that its own colouring is, as it were, cancelled, or at least very greatly modified. We note, too, that an animal in reality reddish-brown in colour becomes violet owing to the blue in the atmosphere. Refinements of form and hue are lost in the glare of the sun, and only the stronger outlines and more pronounced colours assert themselves. Sometimes the sun's rays, reflected from the animals' skins, produce the effect of glowing patches of light, sometimes they are absorbed ; sometimes the animals look quite black, sometimes absolutely white. Photographs of animals taken under such conditions do not, of course, give a good idea of the normal colouring of the animals. The success of a photograph depends, therefore, very largely upon the nature of the light.

For an effective picture you need to have a group of animals either standing still or in motion, and this you can very seldom get at close quarters, though now and

again you may happen upon them standing under trees; and when this occurs you may hope for good results, because the way in which the blue rays of light are reflected from the trees has a favourable effect upon the bromide-silver plates.

While it is true that there can be nothing more disappointing than the discovery, when developing one's photographs of animals in a country like Africa, that negatives of which one had great hopes are no good, this very possibility adds to the fascination of the work, and is, as it were, a link between the sport and that of our fathers and grandfathers. The kind of rifle-shooting we go in for nowadays has nothing in common with that of the hunter who was dependent upon a single bullet the effect of which he could only get to make sure of after long experience. To the true sportsman the camera is the best substitute for the old-fashioned gun, inasmuch as it involves very much the same degree of difficulty and danger

How keenly I regret that I had not the advantage from the first of the perfected photographic apparatus that has come into existence as the result of long experience! I look back with regret upon the many failures I experienced in my earlier efforts, the excitement of the moment often causing me to neglect some necessary precaution. Lions, rhinoceroses, hippopotami, giraffes, and antelopes innumerable—nearly all my attempts to photograph them were fruitless. When I came to develop the negatives at night-time I would find a blurred suggestion of the objects I had seen so

C. G. Schillings, phot.

A TELEPHOTOGRAPH OF OSTRICHES, SCARCELY DISCERNIBLE TO THE LEFT OF THE PICTURE.

distinctly before me in the daylight, or else, owing to some mishap, an absolute blank. All the greater was my joy when on rare occasions I did succeed in getting such pictures as those of the rhinoceroses already referred to.

I made it a practice to develop at night in my tent, as soon as I possibly could, all negatives that I thought at all likely to be successful. The only negatives I sent to Europe were duplicates of those which I had already developed myself. At home, of course, the developing can be done much more carefully. No one who has not had the experience can realise what it means to have to develop plates in the heat and damp of Equatorial Africa and with the kind of water at one's disposal there. When I found that my negatives were successful, not content with developing them, I always made a number of bromide-silver copies of them. These were put away in separate cases and the original was despatched home as soon as possible. If this original negative got lost *en route*, I was almost sure of having one of the copies, even if some of the packing-cases got lost also.

The photographer can always console himself with the reflection, in the midst of all his hardships and mishaps, that the pictures he does succeed in taking count for more than so many head of game.

It is very interesting to note that my photographs of birds on the wing have put so many people, especially painters, in mind of the work of Japanese artists. Doflein, in his book *Ostasienfahrt*, speaks as follows of the peculiar faculty the Japanese have in this field of art. "The

Japanese animal painters," he says, "show a more highly developed power of observing nature than that of their Western fellow-workers. They render the swift, sudden motion of animals with astonishing dexterity. . . . They had learned to see and reproduce them correctly before the coming of instantaneous photography. . . . The Japanese seem to have a very highly developed nervous organism. Their art is evidence of this, no less than their methods of warfare—their effective use of their guns at sea, for instance."

I would add to this my own opinion that an inferior shot would have no success whatever with a telephoto lens. You must have learnt to stalk your quarry warily—this is as important as a steady hand. A practised shot who knows how to get within range of the animals is peculiarly well fitted for the work. The least twitch at the moment of taking the photograph ruins everything, for even in the case of moving objects the exposure is not what can be accurately called instantaneous, owing to the peculiarity of the lens.

I have already expressed my view that this non-instantaneous exposure (when not too prolonged) imparts a certain softness and vagueness to the photograph which give it an artistic effect. It gives scope also for the personal taste and preferences of the operator. When taken against the horizon photographs require less exposure than with the velt for background. The dark green of the trees and shrubs no less than the red laterite soil offering unfavourable backgrounds for photographs of animals in Africa, as elsewhere, one has to pay particular attention,

C. G. Schillings, phot.

PHOTOGRAPHS OF BIRDS TAKEN WITH THE TELEPHOTO-LENS AT DISTANCES VARYING FROM 20 TO 200 PACES. 1. SPURRED GOOSE (*PLECTROPTERUS GAMBENSIS*, L.). 2. DARTER OR "SNAKE-NECK" (*ANHINGA RUFA LACEP.*, Daud.). 3. GREATER CORMORANT (*PHALACROCORAX LUCIDUS LUGUBRIS*, Rüpp.). 4. YELLOW-FLUTED FRANCOLIN (*PTERNISTES LEUCOSEPUS INFUSCATUS*, Cab.). 5. A BIRD OF PREY (*MELIERAX POLIOPTERUS*, Cab.) (?) 6. BEE-EATER (*MELLITOPHAGUS MERIDIONALIS*, Sharpe). 7. SHRIKE (*LANIUS CAUDATUS*, Cab.). 8. PELICAN (*PELICANUS RUFESCENS*, Gm.).

TELEPHOTOGRAPHS OF BIRDS ON THE WING. FIRST ROW: THE STORK-VULTURE (*SERPENTARIUS SERPENTARIUS* [MILLER]). SECOND ROW: HAMMERHEAD (*SCOPUS UMBRETTA*, Gm.), SMALL BUSTARD (*OTIS GINDIANA* [OUST]) SADDLE STORK (*EPHIPPIORHYNCHUS SENEGALENSIS* [SHAW]). THIRD ROW: BATELEUR EAGLE (*HELOTARSUS ECAUDATUS* [DAUD.]), VULTURE (*PSEUDOGYPS AFRICANUS SCHILLINGSI*, Erl.), MARABOU (*LEPTOPTILOS CRUMENIFER*, [CUV.], Less.).

of course, to the effects of shadows, shadows which to the eye seem quite natural producing extraordinary effects upon the negatives.

Some of the photographer's difficulties are avoided

when he uses a heavy lens with a long focus. These can be easily used in a strong light. On the other hand they have many drawbacks—they are too apt, especially, to give a blurred effect to the background in the case of objects photographed near at hand. This entails the loss of one of the essential elements

TELEPHOTOGRAPH OF A DWARF GAZELLE (*GAZELLA THOMSONI*, Gther.) IN FULL FLIGHT, TAKEN AT A DISTANCE OF 60 PACES. WHEN ANIMALS IN RAPID MOTION ARE THUS PHOTOGRAPHED, THE BACKGROUND ALMOST INEVITABLY COMES OUT BLURRED.

of such pictures, namely the representation of the animal in its natural surroundings. However, I would like to call the attention of all travellers to the fact that such apparatus are available. Their weight and size entail the putting forth of great strength and energy, both in the carrying of them and the handling of them, but to

C. G. Schillings, phot.

JACKAL TAKING TO FLIGHT, STARTLED BY THE FLASHLIGHT.

my mind no trouble and no exertion could be excessive in the work of securing records of what is left us of animal life, in the spirit in which Professor Fritsch achieved his task in South Africa.

The impossibility of securing sharp, clearly defined impressions of the animals with the telephoto lens at a hundred paces or more, and the few chances I had of photographing them close at hand by daylight, were responsible partly for my determination to go in for flash-light pictures by night. At first my idea was discouraged and opposed by expert advisers, but the Goerz-Schillings apparatus was evolved out of my experiments and makes it possible now to secure excellent representations of wild life.

As I have said already, I did not succeed with my flashlight photographs on my second expedition. And my third expedition, on which I managed to take a few, was brought to a sudden end by severe illness. At that time I had not found a way to combine the working of the flashlight with that of the shutter, essential to the photographing of objects in rapid motion. My cameras stood ready for use in the dark with the lens uncovered and the plates exposed, the shutter being closed automatically when the flashlight contrivance worked. To my surprise and disappointment this arrangement proved too slow; the exposure was too long in the case of animals moving quickly. Jackals emerged from my negatives with six heads, hyenas with long snake-like bodies. Unfortunately I destroyed all these monstrosities, and cannot therefore reproduce any of them here. Now and again,

however, I was fortunate enough to get a picture worth having—for instance, that of a hyena making off with the head of a zebra, and that of three jackals, included in the illustrations to *With Flashlight and Rifle*. The first photograph I succeeded with in 1902 was that of a mongoose coming up to the bait placed for him. On page 657 the reader may see this marten-like animal taking to flight among the thorn-bushes. I secured a number of other pictures, notably of hyenas, both spotted and striped, and of jackals, in all kinds of strange positions, moving hither and thither in search of prey.

What a state of excitement and suspense I used to be in at first when the flashlight flamed out—until I got to realise that owing to the rapid movements of the animals most of the photographs were sure to be failures.

My illness and return from this expedition proved really an advantage in the long run, inasmuch as they enabled me to get the apparatus brought to such perfection as to render possible the photographing of even the most rapid movements. This was brought about in the Goerz Institute, Herr M. Kiesling contriving to secure the simultaneous operation of the flashlight and the shutter.

Equipped with this new apparatus, I set out on my fourth expedition, betaking myself for two reasons to districts with which I was already familiar. In the first place, success was much more likely in a country the speech of whose inhabitants and all their habits and customs were known to me; but my chief reason was that I wished to achieve a pictorial record of the wild life of the German region of Africa. As a matter of

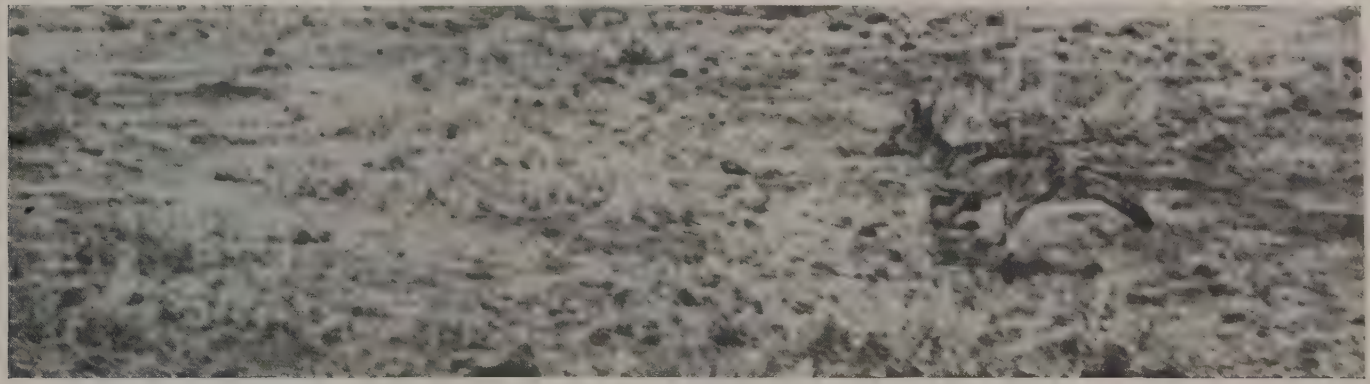
C. G. Schillings, phot.

LIONESS FRIGHTENED AWAY FROM CARCASE BY THE FLASH-LIGHT.

[p. 688

C. G. Schillings, phot.

AIMING AT A PIGEON AND HITTING A CROW! I FOUND THIS SPOTTED HYENA ON THE PLATE INSTEAD OF THE LION FOR WHICH IT WAS INTENDED.



PHOTOGRAPH OF A JACKAL, TAKEN WITH A SMALL HAND-CAMERA.

C. G. Schillings, phot.

PHOTOGRAPH OF A JACKAL TAKEN WITH MY FIRST, PRIMITIVE NIGHT-APPARATUS, NOT TOO SUCCESSFULLY!

IN ORDER TO ENSURE SUCCESS WITH MY FLASHLIGHT-PHOTOS, I USED TO MAKE CONTINUAL EXPERIMENTS BEFOREHAND. I USED TO MAKE SOME OF MY MEN ACT AS MOVING MODELS, AND GET THEM TO WAVE CLOTHS IN THEIR HANDS.

fact, with this kind of object in view, a man might spend a lifetime in any such region, and find that, however

narrow its boundaries, it could always offer him fresh subjects for study and observation.

On arrival the photographic outfit proved so cumbersome, both as regards transport and management, that both Prince Löwenstein, who accompanied me, and who was not easily to be daunted by obstacles, and also Orgeich gave expression to pessimistic views as to the possibility of fulfilling my purpose.

No one, indeed, had been able to boast of success until then with this new apparatus! I had yet to satisfy myself that it was really efficacious—that, for instance, it would enable me to photograph a lion falling upon its prey. Many were the fruitless experiments witnessed by the Pangani forest. We experimented night after night, now at one spot, now at another—my men learning to enact the rôle of lions and other animals for the purpose. The Oriental and the negro are alike in their bearing on such occasions, but these flashlight operations did really succeed in arousing the wonder of my followers. The laughter of my chief man still rings in my ears. "But the lions are far away, master!" he would declare, utterly unable to understand my proceedings. It took me long, and I had had a large number of failures, before I succeeded in overcoming his attitude of incredulity.

As I have already intimated, the efficacy of the telephoto lens in the tropics depends to an extraordinary degree on the conditions of the atmosphere. The efficacy of the flashlight apparatus depends upon the precise absolutely simultaneous working of the flashlight and the shutter. It took me weeks and months (and I very

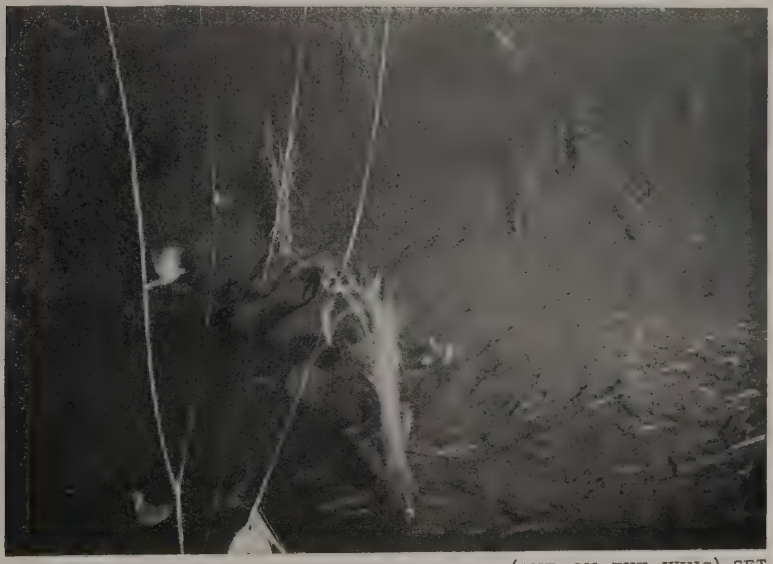
C. G. Schillings, photo.

FLASHLIGHT FAILURES II. BLACK-HOOFED ANTELOPES COMING DOWN TO THE WATER-SIDE TO DRINK. THE BLEMISHES WERE CAUSED BY BITS OF THE MATERIAL WITH WHICH THE FLASHLIGHT POWDER WAS COVERED TO PROTECT IT FROM DAMP BEING BLOWN INTO THE AIR AND BURNING AS THEY FLEW IN FRONT OF THE LENS.

C. G. Schillings, phot.

HOW MY FLASHLIGHT PICTURES WERE APT TO BE SPOILT. I. THE ZEBRA IS BEHIND THE STICK TO WHICH THE COMMUNICATING STRING IS ATTACHED.

nearly gave the thing up as hopeless) before I managed to get good results in the wilderness, though theoretically, and to a certain extent in practice at home, the apparatus had been perfected. The heavy dew of the tropical night, or a sudden shower of rain, may easily "do for" the flashlight unless the apparatus has been thoroughly safe-guarded. And there are any number of other mishaps



FLASHLIGHT FAILURES III. TWO TURTLE-DOVES (ONE ON THE WING) SET MY NIGHT-APPARATUS WORKING. MISHAPS OF THIS KIND OFTEN OCCUR.

to be provided against. On one occasion hyenas carried off the linen sandbags that form part of the apparatus; mongooses made away with the aluminium lid of the lens-cap and hid it in their stronghold, an ant-hill; ants gnawed the apparatus itself. And when the photograph has at last been taken, a lot of other harmful contingencies have to be kept in mind. The fact that several shillings'

worth of powder is consumed in each explosion of the flashlight is in itself a serious consideration. Of course, there is always the additional danger of the cameras being stolen or destroyed by natives—a misfortune I experienced more than once.

I would give the intending photographer a special

FLASHLIGHT FAILURES IV. A BLACK-HOOFED ANTELOPE DOE SWERVES SUDDENLY ROUND DURING THE FLASH.

warning against careless handling of the explosive mixture. The various ingredients are separately packed, of course, and are thus quite safe until the time has come to mix them together (I know nothing of the ready-made mixtures which are declared to be portable without danger). This business of mixing them with a mortar is dangerous undoubtedly, for the introduction of a grain of sand is

C. G. Schillings, phot.

PHOTOGRAPHIC STUDIES OF ANTELOPES SHOT BY THE AUTHOR AND NOW TO BE SEEN PRESERVED IN GERMAN MUSEUMS. 1, 2. WATERBUCK (*COBUS. AFR. ELLIPSIPRYMNUS*, Ogilb.), MALE AND FEMALE. 3. ELAND (*OREAS LIVINGSTONI*, Sclat.), FEMALE. 4. MASAI HARTEBEEST (*BUBALIS COKEI*, Gthr.), YOUNG BUCK.

enough to cause an explosion. I myself, as well as others, have had some very narrow escapes whilst thus occupied, and, as every photographer knows, the work has had fatal results in several instances of recent years.

My apparatus revealed several shortcomings even in the improved form. It was not absolutely light-proof, and it had to be set up always, for its automatic operation, in the brief tropical dusk. If no animal presented itself for portraiture the plates exposed were always wasted, unless at dawn they were withdrawn again. (This is not the case with the apparatus as since perfected.)

Many wrong impressions are current in regard to this kind of photography. It can be managed in two ways. Either the photographer himself remains on the spot to attend in person both to the flashlight and the exposure, or else the mechanism is worked by a string against which the animal moves. Before I took my photographs I had been a spectator of all the various incidents represented in them, watching them all from hiding-places in dense thorn-bushes, thus coming, as it were, into personal touch with lions and other animals. Though not so dangerous really as camping out on the velt, where one's fatigue and the darkness leave one defenceless against the possible attacks of elephants or rhinoceroses, you need good nerves to spend the night in your thorn-thicket hiding-place with a view to flashlight snapshots of lions at close quarters. In that interesting work *Zu den Aulihans*, by Count Hoyos, and in Count Wickenburg's *Wanderungen in Ostafrika*, the reader will find interesting and authentic accounts of night-shoots

which correspond with my own experiences. Count Coudenhove in his first book describes very vividly the effect upon the nerves of the apparition of numbers of lions within a few paces of him, when concealed in a thorn-bush at night.

There is a wonderful fascination at all times in lying in wait by night for animals, and watching their goings and comings and all their habits. Even here at home, in our game preserves, the experience of passing hour after hour on the look-out has a charm about it difficult to describe in words. Out in the wilderness it is increased immeasurably. It is an intense pleasure to me to read other people's impressions of such experiences, when I feel the accounts are trustworthy. They are so different in some respects, so much alike in others. In my first book I cited Count Coudenhove, mentioned above, in this connection, as a man of proved courage, who writes at once sympathetically and convincingly. Here let me give a passage from the book of another sportsman, Count Hans Palffy. In his *Wild und Hund* he speaks as follows: "I had been waiting for two hours or so in the darkness without being able to descry the carcase of the rhinoceros" [which he himself had shot and which he was using as a bait for the lion], "when suddenly I heard a sound like that of a heavy body falling on the ground, and then almost immediately the lion began growling beside the dead animal. I could hear the King of Beasts quite distinctly, as he began to pull and bite at the flesh. . . . He would move away from it every ten or twenty minutes, always in the same direction, to

C. G. Schillings, phot. 1 2 3

JACKALS. ONLY ONE IS VISIBLE, BUT THE GLEAMING EYES OF TWO OTHERS (NOS. 2 AND 3) GIVE A PECULIAR INTEREST TO THIS PHOTOGRAPH.

C. G. Schillings, phot.

PHOTOGRAPHS OF EAST AFRICAN ANTELOPES SHOT BY THE AUTHOR AND NOW PRESERVED IN VARIOUS MUSEUMS. 1. SMALL KUDU (*STREPSICEROS IMBERBIS*, Blyth), BUCK. 2. DWARF GAZELLE (*GAZELLA THOMSONI*, Gthr.), BUCK. 3. WHITE-BEARDED GNU (*CONNOCHÆTES ALBOJUBATUS*, Thos.), BULL. 4. BUSH-BUCK (*TRAGELAPHUS MASAICUS*, Neum), BUCK. (THE FEMALE OF THE FIRST-NAMED AND LAST-NAMED SPECIES HAVE NO HORNS.)

give out a series of roars. The effect of this was magnificent beyond description. Beginning always with a soft murmur, he gradually raised his mighty voice into a peal of thunder—I never in my life heard anything so beautiful."

Both on account of the hardships and fatigue involved—which are calculated in the long run to ruin his constitution—and also because he really cannot manipulate his cameras successfully except on starry or moonlight nights, it is most desirable for the photographer to provide himself with an apparatus working automatically You cannot count upon its working as you would wish. The string which sets it in action may be caught and pulled by a bat or even a cockchafer instead of a lion you want to photograph. The photograph reproduced on p. 697, for instance, was the work of the turtledoves therein visible. The motion of their wings, it may be noted, was too quick for a clearly defined record.

This picture, taken in the early morning, is a good instance of the way in which I have always enforced my rule as to never touching up my photographs. The plate was broken on its way home, but the cracks which resulted were left as they were.[1] I remember one case in which I had put up my apparatus with a view to securing photographs of certain lions, and in which I had to be content with a picture of a spotted hyena splashing its way in full flight through the swamp. The hideous

[1] Flashlight photographs may be taken by daylight, as is proved by this photograph and some of those of rhinoceroses in *With Flashlight and Rifle*.

cowering gait of the animal came out very strikingly on the negative.

There is wide scope for a man's dexterity and resourcefulness in the setting up of a flashlight apparatus. All the qualities that go to the making of a big-game hunter are essential to success in this field also. You have to keep a sharp look-out for the tracks of the different animals and to watch for their appearance, taking up your position in some thorn-bush hiding-place or up a tree if you propose to operate the camera yourself by means of a string. In the case of most animals you have, of course, to pay special attention to the direction of the wind. This is not necessary, however, in the case of lions. Lions take no notice whatever of the man in hiding. Elephants, on the contrary, are very easily excited, and when this is so they are apt to force their way into his thorn retreat and trample on him or to drag him down from his point of vantage.

Future workers in this field will find that my labours have served to some extent to clear the ground for them, and we may look forward to many interesting achievements. There can be no doubt that the explorer who provides himself with the necessary photographic equipment will find ample scope for his activities.

My own process was simple enough. I stretched lines of string round the heifer or goat which was to serve as a bait, and the lions, hyenas, etc., falling on their prey pulled these strings, which worked the flashlight—the animals thus taking their own photographs. Some of these

C. G. Schillings, phot.

MORE ANTELOPES. 1. BLACK-HOOFED ANTELOPE (*ÆPYCEROS SUARA*, Mtsch.), BUCK. 2. MOUNTAIN REEDBUCK (*CERVICAPRA CHANLERI*, Rothsch.). 3. GRANT'S GAZELLE (*GAZELLA GRANTI*, Brooke), DOE. 4. ORYX ANTELOPE (*ORYX CALLOTIS*, Thos.), BUCK.

pictures record new facts in natural history. In my first book, for instance, there is a picture of a lioness making off with her tail raised high in the air in a way no artist would have thought of depicting, and no naturalist have believed to be characteristic.

In the course of my labours I had to overcome every description of obstacle, and had constantly to be making new experiments. By the time I had got things right I had so small a stock of materials left at my disposal that I ought to congratulate myself upon my subsequent success. The number of good pictures I secured was far less than I had originally hoped for, but on the other hand it far surpassed what, in those moods of pessimism which followed upon my many failures, I had begun to think I should have to be contented with.

Among my successful efforts I count those which record the fashion in which the lion falls upon his prey, first prowling round it; and those which represent rhinoceroses and hippopotami, leopards and hyenas and jackals, antelopes and zebras making their way down to the water-side to drink; those also which show the way in which hyenas and jackals carry off their spoils, and the relations that exist between them. But a point of peculiar interest that my photographs bring out is the way in which the eyes of beasts of prey shine out in the darkness of night. I have never been able to get any precise scientific explanation of this phenomenon. I have often seen it for myself in the wilderness. Professor Yngve Sjöstedt, a Swedish naturalist, who has travelled in the Kilimanjaro region, tells us that he once saw, quite near his camp,

the eyes of at least ten lions shining out from the darkness exactly like lights. I find the following passage, too, in an old book, printed at Nuremberg in 1719: "Travellers tell us (and I myself have seen it) that you can follow the movements of lions in the dark owing to the way in which their glowing eyes shine out like twin lights."

Even with a small hand-camera it is possible to secure pictures worth having, such as the studies of heads reproduced on the accompanying pages. These must always have a certain value, as they depict for the most part species of animals which have never yet been secured for zoological gardens.

I repeat that there is an immense harvest awaiting the man who is prepared to work thoroughly in this field. Why, for instance, should he not succeed in getting a picture by night of an entire troop of lions? My photographs show how a mating lion and lioness fall on their victim—from different sides; and how three lionesses may be seen quenching their thirst at midnight, all together. With good luck some one may manage to photograph a troop of a dozen or twenty lions hunting their prey—that would be a fine achievement. Or he might secure a wonderful group of bull-elephants on their way down to a drinking-place. The possibilities are immense.

Who has ever seen a herd of giraffes bending down in their grotesque impossible attitudes to quench their thirst? A photographic record of such a sight would be invaluable now that the species is doomed to extinction. But, apart from such big achievements as these, trustworthy photographs of wild life in all its forms—even of the smallest

PHOTOGRAPHS OF (1) A SPOTTED HYENA (*CROCOTTA GERMINANS*, Mtsch.); (2) AND (4) STRIPED HYENAS (*HYÆNA SCHILLINGSI*, Mtsch.), AND (3) A JACKAL.

beasts and birds—are of the utmost value, especially in the case of rare species that are dying out.

This is true not merely of Africa, but of other parts of the world as well. Who is attempting to secure photographic records of the great elk and mighty bears of

SNAPSHOT OF A JACKAL IN FULL FLIGHT.

Alaska? or of the wild life of the Arctic zone—the polar bear, the walrus, and the seal?

The Arctic regions should be made to tell their last secrets to the camera for the benefit of posterity, nor should the wild sheep and ibex of the unexplored mountains of Central Asia be overlooked.

These things are not to be easily achieved, and they involve a considerable outlay of money. It would be, however, money well spent. Money is being lavished

upon many other enterprises which could very well wait, and which might be carried out just as successfully some time in the future. These are possibilities, on the other hand, that are diminishing every year, and that presently will cease to exist. I trust sincerely that it may be my lot to continue working in this field.

"If only the matter could be brought home to the minds of the right people," wrote one of our best naturalists, after examining my work, "tens of thousands of pounds would be devoted to this end."

GUINEA-FOWL.

Envoi

I MAY be permitted a few words in conclusion to reaffirm certain views to which I cling. I would not have my readers attach any special importance to what I myself have achieved, but I would like them to take to heart the moral of my book.

It may be summed up in a very few words. I maintain that wild life everywhere, and in all its forms, should be religiously protected—that the forces of nature should not be warred against more than our struggle for existence renders absolutely inevitable ; and that it is the sportsman's duty, above all, to have a care for the well-being of the whole of the animal world.

Whoever glances over the terrible list of so-called "harmful" birds and beasts done to death every year in Germany must bemoan this ruthless destruction of a charming feature of our countryside, carried out by sportsmen in the avowed interest of certain species designated

as "useful." The realm of nature should not be regarded exclusively from the point of view of sport; the sportsman should stand rather in the position of a guardian or trustee, responsible to all nature-lovers for the condition of the fauna and flora left to his charge.

I would have the German hunter establish the same kind of reservations, the same kind of "sanctuaries" for wild life that exist in America. In our German colonies, especially in Africa, we should model those reservations on English examples. Such institutions, in which both flora and fauna should be really well looked after, would be a source at once of instruction and enjoyment of the highest kind to all lovers of natural history.

FAREWELL TO AFRICA!

Printed by Hazell, Watson & Viney, Ld., London and Aylesbury, England.